Dr. Rush

From the Author

A CASE OF HYDROPHOBIA.

A

CASE

OF

HYDROPHOBIA,

COMMONLY CALLED

CANINE MADNESS,

FROM THE

BITE OF A MAD DOG,

SUCCESSFULLY TREATED.

BY THOMAS ARNOLD, M. D.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, AND OF THE ROYAL MEDICAL SOCIETY OF EDINBURGH.

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PREFACE.

SINGLE cases of common diseases, whose character and cure are well ascertained, and familiarly known, add to the bulk, without adding to the value, of medical information; but of diseases imperfectly understood, whose cure is uncertain, or which have hitherto usually had a fatal termination, every accurate history, whether successful or otherwise, is a valuable accession to the stock of individual facts, into which all knowledge in the art of healing, as well as in every other art, must ever ultimately resolve itself.

As an exact history of a particular case of a disease, hitherto imperfectly known; as an instance of the successful treatment of a disease which has so rarely been cured, as to be generally esteemed incurable; the Case of Hydrophobia, which I now lay before the Public, cannot fail to be interesting. It may perhaps appear unnecessarily minute; but I wished to give a true picture of the whole disorder, and was afraid that, in attempting to reduce it into a smaller compass, I might strike out something essential to the production of a perfect likeness.

I have only to add, that the girl who is the subject of it, is to this day entirely free from all complaints which can, in any way, be supposed to be

connected with the Hydrophobia; that she is now an out-patient of the Leicester Infirmary, on account of an inconsiderable fever, the consequence of catching cold; that till this happened she continued in perfect health; and that she is nearly recovered from this slight indisposition.

Leicester,
May 24, 1793.

A

CASE

OF

HYDROPHOBIA.

1–9* HANNAH SPRINGTHORPE, of Leicester, aged ten years, was on the 3d of April 1792, admitted into the General Infirmary in that town, on account of some alarming complaints, supposed to be the consequences of the bite of a mad dog; and to be the commencement of that distressing train of symptoms, which have rarely been found to yield to the skill of the physician; and being too dreadful to be long endured, usually put a speedy ter-

* These numbers express the number of days, reckoning from the day of the bite.

mination to the life of the hopeless sufferer.

Being absent from home at the time of her admission into the Infirmary, I did not see her till the sixth day of the same month. In the mean time, she had every attention paid to her which her unhappy and interesting situation required, by my worthy and able colleague, Dr. BREE.

Her mother, of whom I made exact inquiry into whatever might tend to throw light upon the case, informed me, that she was naturally of a good habit of body; that she had always enjoyed a remarkably good state of health; that she had never experienced a day's illness in her life, but what had arisen from the measles, and the small-pox; both of which she had gone through very favourably, the lat-

ter when only half a year old, and the former at the age of eight years; that she had entirely escaped the chin-cough; that she was of a good complexion, neither pale nor very florid; small made, but, though not gross, had never been disposed to be lean; that she had never been subject to any kind of fits, excepting that between the age of five and eight weeks she had been much afflicted with wind in her bowels, and green griping stools, during the continuance of which complaints she used to have, almost daily, one or more of those convulsive fits, so common to children of that age, and under those circumstances; and that about a year ago, in consequence of being beaten, and violently ill-treated by one of her companions, she was so much affected as to be for a short time

insensible, and had a headach all the succeeding night, and the next day, but had no other appearance whatever of a fit.

The patient, together with her mother, gave the following account of the circumstances preceding, accompanying, and following the bite:

On Monday, March 26, 1792, a little before seven o'clock in the morning, a neighbour who resided at the top of an entry, leading into a yard or court, at the farthest end of which the parents of HANNAH SPRINGTHORPE inhabited, saw a dog running hastily down the street, whose manner of running, actions, and appearance, he observed, so exactly resembled those of other mad dogs which he had seen, that he had not the smallest doubt that he was mad. On passing by the entry the

supposed mad dog bit a dog that was lying quietly at the top of it, and had neither provoked or noticed him. The dog that was bit crying out with pain and terror, a number of other dogs, belonging to the people who lived in the yard, began to bark at and run towards the author of the mischief, who immediately ran with fury into the midst of them, snapped at, and bit them all, but did not stop; and while they ran yelping away was again returning out of the yard; when, passing by HANNAH SPRINGTHORPE, and being irritated by one of the neighbours who had pursued and struck him with a house brush, he flew up at her, and attempted to bite her in the bosom, but being impeded by the exertions of the girl, who endeavoured to prevent the bite by pushing away his mouth with

her hand, which, by her so doing, was bedawbed with slime from his mouth; and being likewise impeded by the clothing which covered her bosom; though one of his teeth penetrated her handkerchief and her shift, and made a deep impression upon her left breast, about two inches above the nipple, it did not draw blood, but only bruised, and perhaps a little abraded the part, which was at first red, and afterwards became black, and green, as is usual on such occasions. The dog then aimed at her face, which she endeavouring to save from injury by putting her right hand before it, for her left hand was occupied in carrying a tea-kettle, which she was going to fill at the pump with water for breakfast, he bit the fore finger of that hand, and then ran off. The wound seemed as if made by one

tooth, and, though not large, blood flowed in a sufficient quantity to run down the finger; it was immediately wiped clean, her hand was afterwards frequently and carefully washed with soap and water, and the bleeding soon ceased; but nothing else was done till the Thursday following, when she began to use the external application accompanying the Ormskirk Medicine, which she continued to apply according to the directions; and on Friday she began to take the medicine, of which she took three doses; one on that day, one on Saturday, and a third on Sunday morning, in the presence of Mr. BRACEBRIDGE, one of the surgeons of the Leicester Infirmary, who had been applied to for advice and assistance.

On Sunday, April 1st, in the morning, as her mother was leading her

about by the hand to amuse her, and to keep her from eating and drinking, for three hours after taking the medicine, according to the direction, she began suddenly to be overpowered with drowsiness, and begged she might be permitted to sit down, which being allowed to do, she very soon fell asleep. This greatly alarmed her mother, who did not think it right to suffer her to sleep, but again led her about; but she was so very drowsy as almost to sleep as she walked, and complained much of a pain at her heart, not only at that time but all the remainder of the day. In the night she slept pretty well, but was often waked by pain, and what she termed jumping of her heart. On Monday morning she was easy and every way better, and had very little of the pain and jumping of

her heart all the day. She felt them now and then, but they were very slight. On Monday night she rested well. She appeared quite well on Tuesday morning, and ate a hearty breakfast, after which she went cheerfully to work, and said she felt so free from complaints that she thought she should be able to do her whole day's spinning. But a little before eleven o'clock in the morning, as she was standing up to rectify something about her wheel, she suddenly fixed her eyes towards a distant part of the room, cried out, *take him away, take him away*; and continued for about half an hour with her eyes eagerly bent upon some object of imagination, making gestures with her hands and head as if she saw something which terrified her, and from which she wanted to escape, and

still crying out, *take him away;* during all which time she struggled violently to rush away, and was held with difficulty. She then gradually became quiet, suffered herself to be seated in a chair, and for about a quarter of an hour appeared quite insensible; after which she gave a deep sigh, seemed coming to herself again, and called out, *fetch my mother, fetch my mother,* several times; not knowing that her mother was sitting by her, and had for some time, during her agitation, held her in her lap. When she was become entirely sensible, she lamented and wept very much; and on being asked how she felt, and what was the cause of her distress, she replied, that her head would split, and her poor heart would come out. Having remained in this state, complaining of her head and

heart for about an hour, she was put into bed, where she lay quiet, but sighed a good deal, and perspired very much. After she grew better, and was quite calm, she was taken to the Infirmary.

When she first began to recover, her mother offered her a little water to drink; not with any view of trying whether she would refuse it, being ignorant that a dread of water was a peculiar symptom of canine *madness*, as it is erroneously called; but merely with the expectation that it would revive her, and hasten her recovery. And though she could not at first make her take it, the difficulty seems to have arisen from her not being yet sufficiently recovered to know what she was about; and not from any incapacity or reluctance to swallow water; for

she afterwards drank it, when she was quite come to herself, several times, without horror or hesitation, and with the same readiness and ease as in a state of health.

Mr. BRACEBRIDGE cauterized the wound on the finger on Tuesday morning, before she was brought to the Infirmary.

The dog was unknown; and having run immediately away, was not traced nor ever heard of after. But a strange dog, supposed to be mad, and conjectured to be the same dog, was killed that week in a neighbouring village, lying near the road towards which the dog in question was seen to run.

The dogs in the yard which were bit, to the amount of four or five, were all prematurely destroyed; one of them on the Monday following after the bite;

and the others on the next day, when the girl, being so ill, was taken to the Infirmary, and the neighbours, who at first were doubtful, were now convinced and alarmed.

It may here be proper to remark, that a fine yard-dog, belonging to a person in the neighbourhood, who lived exactly over the way, became violently mad, and was destroyed on that account, about three months after the girl was bit. It was not known that this dog was bit; but it was certain that he was at the door at the time when the supposed mad dog bit the other dogs, and the patient HANNAH SPRINGTHORPE. His madness was at first observed by the mother of the patient, in consequence of his catching at her apron as she was passing by his kennel, about a week before the

disorder became so obvious and violent as to make it necessary to destroy him without delay. As he had fortunately been tied up all the time, and the disorder was observed in its commencement, he had no opportunity of doing mischief.

For the first two or three days after she was bit, she was much terrified, and often disturbed in her sleep by frightful dreams, in which she frequently called out to her mother *to take the dog away*, or said something which seemed to have a relation to the accident, and to indicate the great impression which it had made upon her mind. But afterwards she grew more composed; and before she fell ill seemed to have lost all apprehension about it, notwithstanding that rude children did not fail frequently to re-

mind her of it by their insults, calling her Mad Bess, and otherwise upbraiding her with her misfortune; and that even grown persons were so inattentive to her feelings as often imprudently to mention, in her hearing, the alarming and dreadful nature of its consequences.

Happening to be at a distance from home at the time when she was brought to the Infirmary, I did not see her till the Friday following. The above narrative, as I have already mentioned, was afterwards taken from the mother's mouth, in the presence, and with the explanations of the daughter, in which I may, perhaps, have been more minute than to some may appear necessary; but I wished that no circumstance might be omitted that could any way tend to illustrate a case in

which it is of so much importance that there should be no misrepresentation, and no deficiency.

What follows, till I saw her on Friday, is the apothecary's report of the symptoms, and of the medicines and means made use of by the direction of Dr. BREE, during my absence.

APRIL.

TUESDAY 3.

9. When HANNAH SPRINGTHORPE was brought to the Infirmary, this afternoon, about two o'clock, no bad symptoms appeared. She was ordered to take the common *purging mixture* of the house immediately, and to repeat it occasionally, as she had not had a stool for seven days. Her complaints at this time were only pain in her head and side.

About ten o'clock at night she was taken with a kind of fit, which did not come upon her instantaneously, but was preceded by great lightness of her head. During the fit she struggled much, breathed short, and was continually crying out that *dogs*, or *cats*, would bite, or otherwise hurt her. She at length began to catch and bite at any thing which came in her way, and would keep the end of the sheet champing in her mouth. As she grew stiller, she began to mock or contradict, with a degree of acuteness and derision, whatever she heard. Some of the persons present accidentally coughing, or sneezing, she imitated and mocked them. Her eyes were wild and sparkling, moving from object to object, and quick in perceiving whatever presented itself. She laughed at times

very much. Towards the end of the fit she wept, and appeared exceedingly uneasy, and complained greatly of the pains in her head and side, as before its commencement. This fit lasted five hours.

She had had little thirst since she came into the house, and no difficulty of swallowing.

Wednesday 4.

10. For the account of this day I am obliged to my judicious friend Dr. Bree. I find it in his notes as follows:—

"4th. Nine in the forenoon. Her "fits returned this morning, and last-"ed about an hour. The violence of "action was not so great; but she "attempted to bite and spit at the at-"tendants.

" I saw her at eleven o'clock. The
" paroxysm was over; she appeared
" calm and rational; expressed no
" fears, and denied that she had been
" alarmed; she drank some cold water
" out of a glass, as soon as desired,
" without difficulty; I questioned her
" about her sensations in this opera-
" tion; she spoke of a pain in her æso-
" phagus, and left side in the region of
" her stomach, which mounted to the
" thyroid cartilage; but though this
" pain made it disagreeable to swal-
" low the water, she found it not more
" disagreeable than swallowing solids;
" and being more closely asked which
" she disliked most, solids or fluids,
" she said solids gave her most pain.
" She was taken with a paroxysm du-
" ring my stay; and when water was
" thrown upon her face, she was much

" more agitated, and showed great a-
" version. She has had four stools.
" Her head aching, skin soft, pulse
" 80.

" She was immersed in a cold bath,
" and shewed little reluctance to the
" treatment.

" Empl. Vesic. intra scapulas.
" Emplast. Opii gutturi.
" Sumt. Pulv. Cort. Peruv. ʒfs horis secundis,
" cum Vin. Rubr. & Tinct. gutt. x. augendo dosin.

" Seven o'clock, P. M. Pulse 90.
" She has had three stools. Pain in
" her forehead, but calm, and less pain
" in the throat. No objection to li-
" quid, though some pain is still felt
" in swallowing. Baln. repeated.
" Medicam. ut antea."

THURSDAY 5.

11. She had this morning much

sickness, and vomited up her medicines and food. Was thirsty, and somewhat feverish. Her head was better, and she had been more composed during the night. She was ordered to take *five grains of gum pills, with six drops of laudanam, every four hours. Every thing else, excepting the red wine, was ordered to be omitted.*

Friday 6.

12. I saw her, for the first time, this morning, and found her with so little complaint of any kind, and in particular so perfectly free from those symptoms which characterize, or usually attend, the Hydrophobia; that it appeared right to desist from the use of all those medicines which had hitherto been prescribed with the express intention of combating that disorder;

and especially as my judicious colleague Dr. BREE joined with me in suspecting that there had been a false alarm. With his approbation, therefore, I had recourse to olive oil; rather with a view of giving time for the disorder to discover itself, if there was really any canine infection, than from any confidence in its power of preventing the apprehended evil; though its acknowledged efficacy in obviating the fatal effects of the animal poison instilled into a wound by the bite of a viper, gave plausible ground for the trial of a medicine which was at once cheap, simple, easily to be procured, and easily applied, in a dreadful and usually fatal malady, for which no very probable, much less certain remedy had hitherto been discovered.

Directions were accordingly given

that she should take *one table-spoonful of oil of olives every four hours; that the same oil should be plentifully applied to the wound, and to the whole right arm, and be frequently renewed: it was likewise ordered that the patient should immediately be put into a warm bath.*

MONDAY 9.

15. She complained that her forehead and stomach were in some degree in pain. In other respects she had no material complaint. Her appetite was good. She had three stools in the course of the day, in consequence of having taken a small quantity of *purging mixture*; bore the warm bath very well, and without the least uneasiness or discomposure; and said she had not the smallest difficulty in swallowing either solids or fluids.

TUESDAY 10.

16. The warm bath was repeated last night with the same success; and she was all this day in every respect as well as yesterday. Four leeches were applied to her temples, on account of the pain in her forehead; and she was ordered to use the warm pediluvium every evening, instead of the warm bath.

WEDNESDAY 11.

17. Her head and heart were almost entirely free from pain; and she only complained of being rather faint and low.

THURSDAY 12.

18. She felt more pain at her heart; but her head had continued easy; had fits from half past eleven o'clock last

night till four o'clock this morning; having not had a stool since Monday, she was ordered to take a *spoonful* of *purging mixture* immediately; had three fits during the day, each of which continued about an hour.

FRIDAY 13.

19. She had many more fits in the night, and this morning; which concluded with spasmodic contractions of the legs, arms, eyes, and mouth. At ten o'clock yesterday evening she again began the use of *laudanum;* of which she was ordered to take *four drops every three hours; continuing the oil of olives externally and internally* as before. *A blister was ordered this day to be applied to the nape of the neck; the warm bath to be used every night, and the oil and laudanum to be persisted in.*

SUNDAY 15.

21. She had *four more leeches applied to her temples this afternoon,* on account of some return of the pain in her head.

MONDAY 16.

22. She had many fits in the night; but they were less violent than before. This morning, before ten o'clock, she BEGAN *to dislike the pouring out of liquids; and to take both solids and fluids with great reluctance, and to swallow them with much difficulty, because, as she said, her mouth and throat were sore, and the act of swallowing painful and distressing.* But she swallowed both on being pressed to do so. She was put into the *warm bath in the morning, and again in the evening,* and was not much affected on either occasion. She was

ordered in the evening to take *six drops of laudanum every three hours, and began to take this dose at seven o'clock.*

TUESDAY 17.

23. *Half past one o'clock.* She had a very good night, and was at this time very calm; though she had had two or three fits early in the morning; which indeed had not been violent, or of long duration, and had chiefly showed themselves in spasmodic rigidity of the muscles of the arms, legs, face, and apparently of the whole body.

At this time, on hearing water poured out of one basin into another, without seeing or being aware of it, she expressed great dislike, and desired earnestly that it might not be done, because, she said, it hurt her throat; and when I presented a basin

of water to her sight, she turned away her head, with strong expressions of distress in her countenance, and said, that the sight of water, as well as the noise, in like manner hurt her throat. But she made no complaint, on these occasions, of any particular pain, or affection of the stomach.

She also complained of pain in her forehead and temples; which seemed, if I rightly understood her, to be connected with the pain in her throat.

The glands under the chin were found, upon examination, to be rather swelled, and painful; as were those in each axilla: and those in the right she said had been painful for several days. The pain could be evidently traced, by gentle pressure, from the wounded finger, up the inside of the arm, to the right axilla. She also complained

of pain in her breast, about the part in which the dog had left the impression of his tooth; and in the left nipple, which hurt her much, when even but slightly pressed, and was at this time, and had been from the time of her first coming into the Hospital, larger than the right.

Half past two o'clock. She took a bolus, consisting of a *scruple of musk*, but with a good deal of reluctance: she swallowed it, however, very well; excepting that she seemed to have that kind of pain in the throat which accompanies a slight angina. Her urine deposited a plentiful, light-coloured, sediment. I ordered her *to repeat the musk, in the same quantity, every three hours: to have volatile liniment applied plentifully, and frequently, to her throat: to go into the cold bath im-*

mediately: to take a little red port wine occasionally, in sago, or otherwise: to omit the internal use of oil of olives; but still to apply it externally, as before.

Half past five o'clock in the evening.— She had a stool this afternoon, for the first time since Sunday. She went into the bath with a good deal of reluctance; but seemed chiefly affected by the noise and agitation of the water, which gave her the same pain and uneasiness, as it did when pouring from one vessel into another. Had just had a fit in my absence. Dr. BREE, who was present, found her evidently affected by water, during the apparent insensibility of the fit; both when it was poured from one vessel into another, and when an attempt was made to get a little of it into her mouth.

Half past six o'clock in the evening.—

Being at this time perfectly recovered from her late fit, and quite composed, I persuaded her to swallow a wine glass-full of cold water. She appeared very much afraid of doing it; brought the glass several times near to her mouth, and drew it back again; but at length resolutely swallowed it. Instantly her face, and whole body, became convulsed; she turned suddenly round, being then sitting up in bed, and, clapping her hands to her face, threw herself upon her face upon the pillow; in which posture she lay for some time, moaning, and expressing great pain and uneasiness; and her whole body appearing quite stiff. When this agony, which lasted for a minute or two, was over, and I inquired how she had felt; she told me that swallowing the water made her throat smart, and thus caused

the agony she had experienced; that the coldness of the water seemed to give her the most uneasiness, and to be the principal cause of her sufferings; that, though all liquids produced the same uneasiness, in some degree, yet she could swallow wine with less difficulty than water; and that no liquids, when drunk moderately warm, were by any means so painfully distressing as when drunk cold. It was remarked by the apothecary, that the musk, of which she had taken two doses since it was ordered at half past two o'clock, seemed to have considerably abated the difficulty of swallowing; and that she had not only swallowed the second dose of musk with much less difficulty than the first, but that she had swallowed the water above-mentioned, with more ease than at any time before during

the day; and had swallowed red wine, of which she had taken two ounces since it had been ordered, and other things, with less difficulty than before. The pulsations of the arteries were 100 in a minute.

I now directed, since the *musk* seemed to abate the spasms, and difficulty of swallowing, *that she should take half a drachm of it, in the form of a bolus, every three hours. I also directed that four leeches should be applied to the temples immediately; that she should go into the cold bath at nine o'clock the next morning; and that the volatile liniment, and olive oil, should be continued as before.*

Dr. BREE's memorandums of this day are as follows:—

" 17. Spasms in the night. At eleven " o'clock this morning I saw her. She " complained of pain in her head very

" acute over the forehead—a pain in the
" axilla of the left arm, and pain
" stretching from the finger wounded
" up the right arm—her throat very
" painful, and swallowing very disa-
" greeable. Water poured into a basin
" affected her extremely, though per-
" formed on the opposite side of the
" room. When I asked her what af-
" fected her, she said with great ex-
" pression of horror, 'that man pour-
" ing water, which hurt her throat.'
" When a glass of water was brought
" to her, she refused to drink, with the
" greatest agitation. A spaniel brought
" into the room seemed to excite a si-
" milar horror, and she entreated that
" he might be removed. Pulse 98.
" Eyes suffused and heavy.

" 5 P. M. The cold bath seemed
" not to excite uneasiness; and she

" became more quiet after it. Whilst
" I was with her, fits of spasm
" came on—she appeared suddenly te-
" tanic—her eyes fixed—her features
" settled, and limbs rigid. Pulse 109.
" Afterwards she was more relaxed,
" but insensible, with involuntary mo-
" tions. When asked to drink water,
" she appeared perfectly unconscious
" of the question. It was poured into
" a basin with the usual noise, and she
" became extremely agitated, though
" in the same apparent state of insen-
" sibility. When this affection sub-
" sided with the noise of the water,
" a muttering delirium succeeded, in
" which she expressed a few uncon-
" nected words; but answered no ques-
" tion, nor seemed to understand any.
" A glass of water was brought to her,
" but she took no notice of its appear-

" ance—she was desired to drink, with-
" out any influence upon her appre-
" hension—a little water was then put
" within her mouth, and her spasms
" immediately took place, though no
" return of sense appeared—these con-
" tinued for a minute—she then ap-
" plied her hand to her throat fre-
" quently, and said 'here! here!'—
" Submaxillary glands are swelled.—
" Pulse 110.—I left her in this insen-
" sible state."

WEDNESDAY 18.

24. *Seven o'clock in the morning.*—She rested well, and slept soundly, after ten o'clock last night: was at this time very calm; said that the pains in her temples were much easier than they were before she was leeched. Had felt but little pain at her heart. The

pain of the right arm, and of both the axillæ, continued nearly the same. The smarting and pain of her throat, upon hearing the noise of pouring water, affected her as usual. She had taken, during the night, half a pint of sago prepared with wine, besides a small quantity of red port wine frequently, and had eaten two biscuits. She had taken three boluses of musk, each containing half a drachm; and had had a copious stool about an hour before, which seemed to relieve her.

Nine o'clock in the morning. She went into the cold bath with more reluctance than yesterday, and seemed more affected by it than before.

Half past twelve o'clock.—She had had a fit, which lasted about a quarter of an hour; in which her attention was fixed upon some particular object,

which she frequently called to. Before this fit, she was taken with a hickup. She was at this time observed to be affected by water, on trials being made in the same manner as has been before described.

Four o'clock in the afternoon.—She went into the bath, and did not seem so much alarmed as in the morning.

Half past five o'clock in the afternoon.—She now took a wine-glass of cold water, by the persuasion of myself and Dr. BREE, which gave her the same pain and sensation in her throat, and agitated her in the same manner as last night.

Her pulse was at this time 108.

Some eruptions were observed, particularly on her left arm, and on her back, which were a good deal inflamed, and very painful.

She was ordered to continue *to take half a drachm of musk every three hours; to apply the liniment to the throat as usual; and to go again into the cold bath the next morning at nine o'clock.*

THURSDAY 19.

25. She rested well in the night, and slept quietly; excepting that two or three times she talked of water in her sleep, and appeared uneasy for a short time. She had neither fit nor hickup. She went into the cold bath at nine o'clock, and bore it tolerably well. Had a slight momentary rigidity about half past nine o'clock, and another about half past ten.

About eleven o'clock she had a painful, costive, black stool. At twelve was very composed; had had no return of fits, or rigidity; had taken wine,

biscuit, and cake, with less difficulty than before; and had made about half a pint of clear amber-coloured water. Her pulse 88.

The *dose of musk was ordered to be increased to two scruples every three hours,* and the *cold bath to be repeated in the evening.*

Immediately after dinner she had a very strong convulsive fit, which lasted half an hour; in which she had great rigidity of the throat, with frequent coughing and sneezing. When she was somewhat recovered from it, she complained much of the pain of her throat and temples. This seemed to be one of the worst fits she had ever experienced. From dinner-time till ten o'clock at night she had about eighteen fits. They grew gradually slighter, and with longer intervals, as

the evening advanced. The longest continued about half an hour; and several of the short ones only for a few minutes. The intervals at first were very short; and sometimes a fresh fit came on before she was well recovered from the preceding one. Afterwards the intervals became gradually longer; and at last not only the fits were merely momentary, but the intervals much extended. The more considerable fits came on with delirium, in which she appeared particularly cheerful, and sometimes laughed immoderately. Towards the end of the fit she became convulsed in her throat and limbs, and coughed and sneezed frequently, as before mentioned; and when the symptoms abated, and she became sensible, and capable of giving an account of herself, she always com-

plained much of pain in her throat. At the beginning of three of the fits, she was teazed with an incessant hickup.

She went into the cold bath in the afternoon, as usual, and seemed to express less uneasiness and apprehension than she had hitherto done.

She took, during the day, wine, sago prepared with wine, a small quantity of boiled beef, some broth, biscuit, and part of a bun. The bolus seemed to agree with her, and she swallowed it as well as before.

The pulse, at ten o'clock at night, 86.

Friday 20.

26. She had ten fits in the night. The four first were slight, and continued but a short time. The four following continued about half an hour

each. The two last were, like the four first, very slight ones.

She bore the bath in the morning very well, and seemed chiefly affected by the coldness of the water.

She made no water all night; but voided about half a pint, of a light colour, about nine o'clock this morning. Had a costive dark-coloured stool about eleven. Her pulse at that time 92.

On examining her throat, the back part appeared rather full, but the fulness was so trifling as to be but barely perceptible; and it appeared slightly streaked with red; but not more so than is very common when there is not the smallest disorder, or uneasiness in the throat.

About six o'clock in the evening her face was washed, when she seemed little affected, either by the feeling or

by the noise and agitation of the water: and she went into the cold bath with very little concern.

She complained very little of the pain in her temples and throat, and was perfectly sensible and composed all day, till about eight o'clock in the evening; after which she had two slight fits, each of which lasted near a quarter of an hour.

SATURDAY 21.

27. About one o'clock in the morning she had a slight fit, which lasted not quite ten minutes; and another about six o'clock, which continued an hour and a half, but, like the former, was not very violent. She rested well during the intervals, and complained but little of pain all day.

The bath was repeated in the morn-

ing and afternoon, without pain or apprehension. At two o'clock her pulse beat 90 times in a minute. That part of the left breast where the dog had made an impression with one of his teeth, without drawing blood, was slightly inflamed, and much resembled, in appearance, the part where the matter has been inserted in inoculating for the small-pox, just at the time of the commencement of the eruptive fever. *The pain under each axilla was entirely gone.*

SUNDAY 22.

28. She did not experience any thing which could properly be called a fit in the night; but she felt something like a tendency, as she thought, to one, three or four times, when disturbed to take her medicines. The pain, how-

ever, in her head was troublesome, as well as a pain in her left side, near her heart, and kept her from resting so well as she otherwise seemed disposed to do.

As she had had no stool since nine o'clock on Friday morning, a *clyster* was injected about ten o'clock this morning, and she had two stools. *Four leeches were then applied to her temples,* which relieved the pain in her head.

She still complained of some pain in her left breast, though the inflammation about the part which was bit, and the swelling of the nipple, were both diminished.

She went into the bath twice, as usual, without much uneasiness.

At one o'clock the number of pulsations was 93 in a minute.

She was quite calm all day, and

made but little complaint of pain in the evening.

MONDAY 23.

29. She had three slight fits in the night, each of which continued about a quarter of an hour. Was nearly free from pain all day; excepting the pain in her head, which was, however, much better than before the leeching yesterday.

She went into the bath in the morning of her own accord, only taking hold of another person's hand; and in the same manner in the evening.

At two o'clock the pulse 106.

Great part of her body, and particularly her breast, arms, and back, were observed to be overspread with pustules, resembling the small-pox. Immediately round the centre of each was

a considerable inflammation and swelling, attended with much pain; which inflammation and swelling gradually diminished as they receded from the centre. Round some of them the inflammation was two inches in diameter. This eruption began four days ago; first on her left arm, and on her back. Some small pustules were this day beginning to appear on her legs, which had hitherto been quite free from them.

In the evening, before ten o'clock, she had two slight fits, which did not continue above a quarter of an hour. The pain of her head was very trifling; but she complained more of the pain at her heart than usual.

TUESDAY 24.

30. She rested well in the night;

excepting when, at intervals, the pain at her heart was more violent, of which she complained more last night than ordinary; when she seemed also to have a greater difficulty of swallowing. The pain at her heart was better in the morning.

The noise of water was observed to affect her again, when the nurse this morning was pouring some water into the tea-kettle; yet she bore the cold bath, both in the morning and in the afternoon, without uneasiness or apprehension. Her throat appeared, on inspection, to be in a natural state.

A clyster was injected in the morning, but was not come away in the evening. She had had no fit since ten o'clock last night. Was free from the pain in her head and throat all day; and the pain at her heart was

better. She ate some veal at dinner; and afterwards had some tea, with bread and butter, and what is called a penny *wig*. The *volatile liniment was this afternoon directed to be applied to the region of the heart, where the pain was so frequently troublesome.*

WEDNESDAY 25.

31. Had no return of the fits in the night, but was taken with a slight delirium, about three o'clock in the afternoon, which lasted near half an hour, but was unaccompanied with convulsions. At nine o'clock in the morning she said the pain in her head was quite gone; but that the pain at her heart was very considerable at times.

The clyster did not come away till this morning, when it produced a plentiful, easy stool.

The eruptions appeared to-day to be going off; and the inflammation, which was much abated, seemed not larger in extent than the size of a sixpence. Her throat was troublesome, at times, in the morning; but quite easy, as well as her head, all the remainder of the day. She had no difficulty in swallowing all day; but complained much of the pain at her heart; ate and drank well; and was quiet and calm, excepting during the half hour of delirium above mentioned. She bore the bath well both in the morning and afternoon.

At two o'clock in the afternoon her pulse beat 125, and 116 at ten at night.

THURSDAY 26.

32. She slept well all night. Had no fits; and her head was quite well

all day; as was her throat, excepting after going into the bath in the morning, when it was in pain for a short time; but it was not at all affected by bathing in the afternoon. The pain at her heart was troublesome more or less all day, but never violent. She was calm, and her appetite was good.

A clyster was injected in the afternoon, and she had two moderate, easy stools.

The pulse 104, at eight o'clock in the morning; and at nine at night 118.

She was ordered *to take two scruples of musk every three hours; and to continue the application of the liniment to her throat and sides, and the olive oil to her arm, and the use of the cold bath twice a day, as usual.*

Friday 27.

33. She slept well. Continued free from fits. The eruption seemed gradually going off; excepting one pustule on her right arm, and another on her right leg, which were much inflamed. Those in which the inflamma was abating had a remarkable appearance; the inflammation was most intense round the centre, and became gradually more dilute as it extended over the disk towards the circumference, which was bounded by a circle of deeper red, though not so intense as that in the centre; so that the whole put on an appearance which might not unaptly be compared to that of a halo round the moon.

She complained much in the morning about eight o'clock, of the pain of

her head and heart; said that her throat was worse, and that she was less capable of swallowing. She was then quite calm and sensible; and though she said the noise of water hurt her, went willingly, and without complaint, into the cold bath. Her pulse then beat 100. The pain of her head afterwards grew easy; and that of her throat better; but the pain of her heart continued nearly the same. She had no remaining pain in the axillæ; nor along the inside of the right arm. Had been entirely free from fits since three o'clock on Wednesday afternoon. Was not disturbed at all by the cold bath in the evening. But about ten o'clock at night was taken with a troublesome hickup, which increased the pain of her head and heart.

She took her food well; and had two moderate stools in the course of the day. Pulse at six o'clock in the evening 118.

SATURDAY 28.

34. She was troubled with the hickup at times, which kept her awake most of the night; but had some sleep from four o'clock to six in the morning. Complained much of her head and heart all day; and of a pain at her stomach, and a disagreeable sour taste in her mouth. The hickup ceased about three o'clock in the afternoon; but became troublesome again in less than two hours. Her throat was in general easy; but sometimes pained by the incessant convulsive motion of the hickup. She had no fit.

She was ordered *to take from three to*

five grains of calcined magnesia with each dose of musk; five grains with the first three doses, and three grains afterwards; and to have four leeches applied to the temples. A liniment of camphor, volatile spirit of sal ammoniac, and oil, was ordered to be applied to the region of the stomach.

The leeches performed well, and relieved her head considerably. The bath did not discompose her in the morning. In the afternoon it was omitted, on account of the application of the leeches. She had one stool.

Pulse 112, at eight o'clock in the morning; and 105, at two in the afternoon.

SUNDAY 29.

35. The hickup was unceasing till two o'clock in the morning, excepting

when interrupted, which it several times was, by fits of sneezing. From two o'clock till eight she slept very well. The hickup was less troublesome all day; but became more so again in the evening. The pains of her head, heart, and stomach, were all better during the morning; in the afternoon the pain at her heart and stomach became more troublesome; but grew better in the evening, when the pain in her temples increased. Her throat was pretty easy all day. She bore the cold bath very well. Ate and drank plentifully, and with ease. Had three stools. Pulse 84, about one o'clock in the afternoon; and at nine o'clock in the evening, 112.

MONDAY 30.

36. She was seized with a strong fit

about ten o'clock last night, which lasted till about four o'clock this morning, in which she was very delirious, but had little of her former spasms and rigidity. During this fit the pain from the noise of water was very evident. The nurse happening to pour out some mint tea incautiously, she cried out that it hurt her much, and begged her immediately to desist.

The left nipple, and breast, appeared in the night to be more swelled and inflamed, and were more painful; and she complained a great deal of her head, heart, and throat. She slept from four o'clock in the morning till eight.

She had another fit for about an hour in the middle of the day, in which she struggled much, and required more than the nurse to keep her in bed, and hinder her from hurt-

ing herself. In the evening she complained of much pain at her stomach and heart; but her breast was less painful, and the inflammation was abated. The pain in her throat she said was less; but still considerable when she heard the sound of pouring liquids.

She took her food sufficiently, and with tolerable ease; and had a plentiful stool in the morning.

The pulse 114, at ten o'clock in the morning; and 80, at seven in the evening.

MAY.

Tuesday 1.

37. She slept very well, excepting when teazed with the hickup, which happened three or four times in the night. Her other pains were better;

but her throat hurt her more than usual in the act of swallowing; and the sourness in her stomach continued.

Between ten and eleven o'clock in the forenoon she *took ten grains of ipecacuanha*, which operated very well, and brought up some very tough phlegm. After the operation of the emetic she said the pains at her stomach and heart were worse; but she was cheerful, and did not complain much of her temples and throat.

The eruption being nearly gone, the bath was renewed in the evening, and she was but little discomposed by it.

She continued free from fits; had no hickup, excepting for about ten minutes in the morning; took her food well, both solid and fluid; the pain at her stomach continued all day, and was not gone in the evening; but the

pains in her head and throat were better. She had a plentiful stool in the afternoon.

The pulse, at ten o'clock in the morning, 82; at four in the afternoon, 80; and 78, at seven in the evening.

WEDNESDAY 2.

38. She continued free from fits, and the hickup; and did not complain of pain any where.

Pulse 80, at ten o'clock in the evening.

THURSDAY 3.

39. She slept well in the night. Was waked in the morning by the nurse unthinkingly pouring water from the tea-kettle, which she said hurt her very much.

Her breast, heart, and head, were

more in pain; and she complained for the first time of great pain in the small of her back. The left breast appeared larger and more inflamed; and the sour taste remained in her mouth.

She swallowed both solids and fluids pretty well; and went into the cold bath without uneasiness. In the evening, at ten o'clock, the pain in her head, heart, and loins, continued nearly the same; that of her throat was considerably better.

She was ordered *to take five grains of calcined magnesia, with half a drachm of musk, every three hours; every thing else as usual: and a plaister of simple diachylon was directed to be applied to the left nipple.*

Pulse 100, at eight o'clock in the morning; and 79, at two in the afternoon.

Friday 4.

40. The struggling fits returned soon after ten o'clock last night. She had four in all. The two first lasted about an hour, and the two last about a quarter of an hour each. She slept well in the intervals. The pains in her head, heart, and loins, were nearly the same. Her throat was pretty well; and the wound in her finger was quite healed. When the fits came on last night, she was at first supposed to be asleep. Afterwards she began to laugh and ramble, and talked much about seeing things that were green; as a green man, a green fire, a green cat; and sometimes she attempted to strike them. As the delirium abated, she began to struggle and contend with the assistants; and

after exerting herself a great deal in this way for some time, she lay quiet, as if asleep, and the fit went off.

She complained principally of the pain in her loins, and left nipple; and of the heart-burn, and sourness at her stomach. The pain at her heart was better; though it frequently made her sigh; and that of her head and throat very inconsiderable. She swallowed her food pretty well. She bore the bath very well, both in the morning and afternoon; and said that though the noise of water was still painful to her, it was much less so than it had been. She was calm and sensible, and had neither raving nor rigid fits all day.

The dose of magnesia was ordered to be increased to eight grains; and the volatile liniment to be applied to the loins night and morning.

The pulse at eight o'clock in the morning, 72; at noon, 76; and at ten o'clock at night, 77.

SATURDAY 5.

41. She had five fits between ten and twelve o'clock last night. In the three first, each of which lasted about a quarter of an hour, she struggled greatly. In the two last, which continued about half an hour each, she did not struggle so much; nor were they in any respect so violent; but she rambled in her talk, and was considerably delirious in the intervals. She rested pretty well during the remainder of the night.

At eight o'clock in the morning her head was free from pain; as was also her throat, excepting a trifling one,

which she felt only in the act of swallowing.

The pain in her loins and heart, and the heart-burn, and sour taste in her mouth, were no better. At two o'clock in the afternoon she was free from all pain and complaint, excepting the pain in her loins, and left nipple, and the sour taste in her mouth. She had the hickup five times, between three o'clock in the afternoon, and nine o'clock at night; but it did not continue above five minutes each time. She was very composed, and well in every other respect, excepting the complaints above mentioned, all day till the evening, when she was several times slightly delirious.

She had one stool in the night, and two in the course of the day.

The pulse, at eight in the morning, 80; at two in the afternoon, 92; and 80, at nine o'clock in the evening.

She was ordered *to take twenty-five grains of musk, eight of calcined magnesia, and one of flowers of zinc, every three hours.*

SUNDAY 6.

42. Soon after nine o'clock last night her fits returned. She was at first very stiff, with an universal spasm, for about half an hour; after that she struggled very violently, so that three people could scarcely hold her; she talked and shouted very much; and frequently declared that such or such a person should not hold her, naming some absent person, whom she seemed to consider as present; and appeared often exceedingly enraged.

This fit lasted about two hours and a half. A little after twelve o'clock she was seized with another of the same kind, which was less violent, and lasted only about a quarter of an hour. Soon after she fell into a sound sleep; and continued sleeping till she was waked at three o'clock to take her medicines, after which she immediately went to sleep again, slept till five o'clock in the morning, and continued free from fits till half past three in the afternoon, when she was seized with another fit, which continued half an hour. This fit began with stiffness, as usual, which continued near a quarter of an hour; after which she sometimes struggled, and talked incoherently; sometimes appeared sensible for a while; then laughed, became again delirious, and seemed to fix her eyes upon some ima-

ginary object, which she frequently struck at with great violence.

While she was in this state, and apparently inattentive to every object, but that of her delirium, water being designedly poured out of a tea-kettle, entirely out of her sight, she started up in a rage, cried out, "*be quiet, be "quiet, you nasty toad,*" struck so vehemently against whatever was near her, that I was apprehensive she might hurt herself, and threw herself with such violence and passion towards the side of the bed from which the sound appeared to proceed, through eagerness to get to the object of her resentment, as nearly to fall out of bed, in which the nurse and apothecary with difficulty detained her. When, after some time, the delirious ideas were nearly vanished, she smiled, and ex-

pressed great pleasure to find the illusion over, that she knew where she was, and, as she expressed it, could *see*, and distinguish, and know those about her. Still however she was at times a little wandering; played with the threads and flocks of the blankets and coverlet; and was full of action, partly sensible, and partly delirious.

She had two other short and slight fits soon after six o'clock in the evening; in each of which she continued rigid for about ten minutes, but without any subsequent struggling, or delirium; and between eight and nine two more, in which she was first rigid for about ten minutes, and afterwards delirious for near half an hour.

At eight o'clock in the morning she complained of much pain in her head, stomach, back, and heart, and of great

soreness, all over, from struggling, and contending with her attendants; but her throat was quite easy, she swallowed without pain or difficulty, and bore the bath well. At ten o'clock at night the pains in her temples, back, side, and heart, were greater than common; the heart-burn, and sour taste in her mouth, remained; her left breast was less swelled and inflamed; there were scarcely any remains of the eruption; her throat was quite easy, and she had not the smallest pain in the inside of her right arm, or in either axilla.

In the afternoon *four leeches were applied to her temples, and a blister to the nape of the neck; and she was ordered to take twenty-five grains of musk, four grains of calcined magnesia, and two grains of flowers of zinc, in the form of a bolus, every three hours; to continue*

the application of the liniment to the throat, scrobiculus cordis, side, and loins; of the common plaster to the left nipple, and of the oil of olives to the arm; and to go into the bath twice a day, as usual.

The pulse, at eight o'clock in the morning, 82; in the afternoon, as soon as the delirium was quiet enough to allow of its examination, 91; and at en o'clock at night, when a fit was about leaving her, 90.

It may here be proper to observe, that in her delirious fits she has a remarkable quickness, and archness of reply, which she does not possess when she is more calm; and that on these occasions she is apt to make remarks upon, laugh at, mimic, or contradict, whatever is said by the persons about her.

MONDAY 7.

43. She had a stiff fit about twelve o'clock last night, which lasted near a quarter of an hour; another of the same kind and duration about half past one, and another about three o'clock in the morning, in the intervals of all which she had very little delirium. She was restless till four o'clock, probably owing to the action of the blister; but slept well from that time till seven.

She had another fit of rigidity, which lasted about five minutes, at two o'clock in the afternoon; and another soon after of the same kind, which lasted about fifteen minutes; after which she talked much, and appeared to be perfectly delirious. About eight o'clock in the evening she had another,

in which her limbs were drawn up, and she was perfectly inflexible for about three quarters of an hour.

In the intervals, excepting at the times above mentioned, she was always very calm, collected, and sensible.

She complained a little of the pain in her throat in the morning; but it was better in the evening; and never, during the day, was so considerable as to impede in the smallest degree her swallowing of solids or fluids, of which, having a good appetite, she took very plentifully.

The pains in her head, heart, loins, and stomach, and the sour taste in her mouth, were as usual; but rather better in the evening than in the morning.

She bore the bath well. The blister

discharged freely. She had two copious stools.

The pulse 80, at eight o'clock in the morning; 76, at four in the afternoon; and 90, at ten at night.

Tuesday 8.

44. She slept well all night; and had no fit till the evening of this day, when she had three slight ones in the space of half an hour; in each of which the stiffness continued about five minutes, and was succeeded by a slight delirium.

At twelve o'clock Dr. Bree, in my absence from home, ordered her to take *three grains of rhubarb, and half a scruple of magnesia, twice a day; and to take the boluses, as last ordered, without the magnesia.*

The pains in her loins, heart-burn,

and sourness in her mouth, were the same in the morning as yesterday; the pain at her heart, and in her throat, better; the pain in her head gone. In the evening she complained of her head and loins; but said that her heart-burn, sourness in her mouth, and pain in her throat, were much better. In general she had been more apt to feel uneasiness in her throat in a morning, than at any other time.

The blister continued to discharge well. The medicines produced no nausea, and sat perfectly easy upon her stomach. She was much better than yesterday. The eruption had entirely disappeared, and had not left the smallest trace behind. Her left breast was neither so inflamed, so much swelled, nor so painful in the morning; but in the evening, though it still

looked better, she complained of more pain, probably from its being less defended, as she had lost the plaster.

The pulse, at eight o'clock in the morning, 92; at noon, 82; and at night, 128.

WEDNESDAY 9.

45. She was seized with a fit at half past ten last night, which continued about a quarter of an hour. She was at first stiff, and then delirious for some little time after. She slept well during the remainder of the night.

At eight o'clock in the morning the pains in her head, loins, stomach, and heart, were as usual. Her throat was not quite so well as last night; she did not swallow, she said, with so much ease, and the noise of water was

disagreeable to her. She bore the bath, however, very well.

At half past one, the pains at her stomach and heart were quite gone off; her throat was much better; the sourness in her mouth, and pain in her loins, just as before. There was a redness and fulness round the nipple; and it was painful when touched, but not hard.

Her throat was still better in the evening than in the afternoon.

Four leeches were ordered to be applied to her temples early in the afternoon, which performed uncommonly well; *and the boluses to be prepared with three grains of flowers of zinc.*

She had a plentiful stool in the morning, and a moderate one in the evening.

The pulse, at eight o'clock in the morning, 88; about noon, 108; at

six o'clock in the evening, 112; and 120, at bed-time.

THURSDAY 10.

46. She had no fit of any kind in the night; but was restless, and did not sleep above three hours. She was perfectly sensible in the morning, and said that her breast pained her more than it had done last night. The nipple appeared very little inflamed, but was exceedingly sensible, and painful, when touched. Her head was in much pain; and her back, and stomach, and the sour taste in her mouth, were no better. Her throat was not so well as last night; but she took her food very well, and went into the bath with perfect ease. About eleven o'clock in the morning she said she felt ill all over.

In the afternoon, at six o'clock, her head, back, stomach, and breast, were worse; as was also her throat, which was more pained by swallowing solids than fluids.

The noise of water, however, did not hurt her, as it had done two days before. She had a good deal of sickness, but without vomiting.

The pain of her heart was better.

At ten o'clock at night, the pain of her head, stomach, breast, and back, continued troublesome. She complained of pain in making water, which she said she felt more in her back than in any other part; was thirsty, hot, and restless; her throat was swelled, and more painful, and swallowing more difficult. She took her food, however, in pretty good quantity, though with pain

She had no fit all day. The sour taste in her mouth continued as usual. Had a moderate stool in the morning, and a plentiful easy one in the evening.

The pulse, at eight o'clock in the morning, 92 ; about noon, 116; at six in the evening, 120 ; and at bed-time, 128.

Friday 11.

47. She was restless and feverish, till about two o'clock in the morning, with much thirst and great heat. The pains of her breast, back, stomach, and head, were much worse ; and her throat was very bad. She did not sleep till two o'clock in the morning. From that time till five she slept very well ; and afterwards slept about an hour and half between five o'clock and eight.

The cold bath in the morning increased the pain in her throat, and the uneasy feeling all over her.

At one o'clock I saw her, and was satisfied that she had catched cold. Her throat was slightly inflamed; chiefly the right amygdala. She complained of pain in her back, stomach, and head; and said that the latter was worse than she had ever experienced it before; but that she had felt no pain at her heart since the application of the blister to her neck; that her throat was sore, and she swallowed with less ease than she had lately done; but that this soreness and difficulty of swallowing seemed to proceed merely from the slight inflammation to which the cold had given occasion; and that she felt ill, and in pain, all over.

The pulse, which had been 96 when

first examined in the morning, was now 127.

She was ordered to take *a scruple of musk, with three grains of flowers of zinc, three grains of calcined magnesia, and one drop of laudanum, in the form of a bolus, as usual, every three hours; and to take after it a spoonful of Minderer us's spirit, and to omit the cold bath, and the powder consisting of rhubarb and magnesia.*

At three o'clock in the afternoon she had an easy and plentiful stool.

At six o'clock in the evening, there being no alteration in any respect, and her pulse being 124, *four leeches were applied to her temples*, which produced a free discharge of blood. While they were applying she had a fit, in which the spasm was very strong in the beginning, and she was perfectly insen-

sible; afterwards she was delirious for half an hour, and laughed immoderately during the delirium. When she became sensible again, she complained much of the pains in her stomach, back, and breast; also of much pain under her right ear, where was a small hard tumour, of about the size of a hazel-nut; which she first perceived in the morning, but of which she did not complain till now; and which, when she swallowed, gave her, she said, a great deal of pain.

Pulse 128.

During the bleeding of the wounds made by the leeches, she was much affected when the nurse squeezed out a sponge in water, so as to make a considerable noise; called out that it hurt her throat; and begged she would immediately desist.

She said that she felt more pain, altogether, at this time, than she had ever done before.

At ten o'clock at night her head, stomach, nipple, back, and the parts about the tumour under her ear, were very painful; she complained much of thirst and heat, but did not seem disposed to sweat. She was very restless:—took five drops of *laudanum*. Pulse 128.

SATURDAY 12.

48. She was taken with a slight spasmodic fit about eleven o'clock at night, which continued three quarters of an hour; after which she was delirious for near a quarter of an hour; when she became stiff again for a short time, and then delirious for half an hour.

About two o'clock she fell asleep, and slept almost without intermission till eight o'clock in the morning.

When she awoke the pain in her heart was quite gone; and that of the tumour under her right ear was rather diminished; but her other pains were not at all abated.

At noon the pain of her stomach was better, but the sourness undiminished; the pain in her head no better; that in her breast considerable; the nipple soft in the middle, and for a small space round; beyond and beneath which, the glands were hard. Not only the tumour behind her ear was glandular; but the glands all down the neck, on the same side, were knotty, hard, and painful. Her throat was nearly as yesterday to the view; being slightly inflamed about the right

amygdala; but it was somewhat less painful. The pain in her loins, she said, was worse than ever; but that she did not feel quite so ill, nor so full of pain, all over: in short, she was, upon the whole, better than yesterday.

She was then ordered *to take fifteen grains of musk, three grains of flowers of zinc, four grains of calcined magnesia, and three drops of laudanum, every four hours, as before, with one table-spoonful of Mindererus's spirit.*

At seven o'clock in the evening, the most considerable pains she felt were those of her loins, and nipple; which, with the pains in her head, were more troublesome than they had been all day. Her throat, and the tumour behind her right ear, were nearly in the same state, being chiefly painful when

she swallowed. Her stomach was almost free from pain; and her heart continued entirely so. She was cheerful; and had taken her food well.

A fit seized her a little before nine o'clock; in which she was in a state of rigidity for about twenty minutes, and after that delirious for almost half an hour.

At ten o'clock all her pains were rather better; but she complained of much thirst; her skin was dry, and she was considerably feverish, though less so than the night before.

She had a plentiful stool early in the morning.

The pulse, at eight o'clock in the morning, 120; at noon, 108; at seven o'clock in the evening, 118; and at ten, 120.

SUNDAY 13.

49. She had another fit of the same kind, which commenced about half past ten o'clock last night; continued near half an hour; was then succeeded by a delirium of about five or six minutes; and after that by another spasmodic fit of half an hour. She went to sleep about twelve o'clock, and slept till seven in the morning. She had this day no pain in her stomach, though the sour taste still remained; no pain at her heart; the pain in her head was better, the pain in her back and in her breast considerable, and especially round the nipple, the glands being more enlarged. Her throat was better, though it hurt her a good deal in the morning, as usual; the swelling of the glands be-

hind the ears, and down the neck to the clavicle, was better; though still considerable, and not free from pain. In short, she was altogether better, she said, to-day, than she had been for some time.

At seven o'clock in the evening she felt still better than she had done all day.

At ten o'clock, however, in the evening, she was more complaining. The pain in her throat, indeed, was better, and but little troublesome, excepting in the act of swallowing; but the pains in her head, and back, were worse; the pain in her stomach was returned; and the pain in her breast was increased, and much affected by a full inspiration; she was thirsty, and feverish, though less so than last night; and had no tendency to perspiration.

She had two stools in the afternoon.

Her pulse, at eight o'clock in the morning, 96; at half past one in the afternoon, 98; at seven in the evening, 104; and 116, at ten at night.

She was ordered *to take fifteen grains of musk, three grains of flowers of zinc, five grains of calcined magnesia, and four drops of laudanum, with a table-spoonful of Mindererus's spirit, every three hours, as usual.*

MONDAY 14.

50. She had been troubled with very little pain in the night, and that chiefly in her back when she made water; had had very little fever, and had slept well. In the morning the pain of her head and back continued better; that of her throat nearly the same.

The nipple was as painful as ever;

the tumour behind her ear was less so.

At noon she was much better; and almost entirely free from every other pain but that of her nipple.

She was then ordered *to take half a scruple of musk, three grains of flowers of zinc, four drops of laudanum, and four grains of calcined magnesia, with Minderer's spirit, every three hours, as before: and a cataplasm of green cicutæ was directed to be applied to her breast.*

At seven o'clock in the evening her pains were all better, excepting that of her nipple; and she was free from heat and thirst.

At ten o'clock she had some little stiffness for about five minutes; but no delirium. Her pains were easier, she perspired copiously, and was much inclined to sleep.

She had a moderate stool in the morning; a plentiful one early in the afternoon; and again a moderate one in the evening.

Pulse, at eight o'clock in the morning, 88; at noon, 76; at seven in the evening, 86; and at ten, 92.

Tuesday 15.

51. She rested well all night, was free from pain, perspired much, and was neither thirsty nor feverish. In the morning she was quite cool, and all her pains were better, excepting that of her back, which was troublesome when she made water, and that of her breast, which was constantly so.

At one o'clock in the afternoon, when I saw her, she was free from all other pain excepting that of her breast,

where there was more inflammation and hardness, and which was more violent than ever; and that of her back, which was only troublesome just after making water.

She was ordered *to increase the dose of laudanum to five drops in each bolus.*

At seven o'clock in the evening her greatest pains were still in her back and breast; but the pain of her head was returned; and that of her stomach, when she drew in her breath. Her throat gave her little or no pain; and she could swallow very well.

At nine o'clock at night she had a fit of five minutes, succeeded by a delirium of a quarter of an hour; and soon after that another fit, in which she was stiff, and senseless, for ten minutes, and afterwards delirious for fifteen. When she was recovered, and

quite sensible, she complained of her back, breast, and stomach, as before. The other pains troubled her but little.

She had a stool in the morning; and another, and plentiful one, early in the afternoon.

Pulse, at eight o'clock in the morning, 78; at one in the afternoon, 100; at seven in the evening, 93; and 112, at night, when she was just recovered from her last fit.

Wednesday 16.

52. She had a fit about half past ten o'clock last night, of fifteen minutes, succeeded by a delirium of fifteen minutes, which was followed by a hickup of nearly the same continuance; after which she had another fit of about the same duration, which terminated in a very short and slight delirium; and

near twelve o'clock had another fit of almost fifteen minutes, but without any consequent delirium; after which she slept well till six o'clock in the morning. About a quarter past six she had another fit of near fifteen minutes; and half an hour after she had another, which did not terminate in much less than half an hour. During the rest of the day she had neither fit nor delirium, was quite sensible, and rather cheerful. In other respects she was nearly the same as yesterday; but the swelling of her breast was increased, had extended to a considerable distance round the nipple, and was very painful, though there was no great appearance of inflammation about the nipple, and none on the rest of the breast, which was covered with a miliary eruption. She had, indeed, from

the first been subject to miliary eruptions, and cutaneous roughnesses in most parts of her body.

About six o'clock in the evening she had a return of the hickup, which lasted near a quarter of an hour; after which she was very sick, but did not vomit; and felt much heat, but no other uneasiness in her throat.

The pain of her head, or, as she now expresses it, of her eyes, and of her stomach, was worse in the evening about nine o'clock.

She was ordered *to take eight grains of calcined magnesia, with three grains of rhubarb, at bed-time*; *and to repeat the same medicine in the morning, if there should be occasion. The application of oil of olives to the arm, and of volatile liniment and camphor to the pit of the stomach, was laid aside.*

She had two stools in the evening.

Pulse, at eight o'clock in the morning, 92; at three in the afternoon, 96; and 98, at bed-time.

THURSDAY 17.

53. She had a fit, which commenced about ten minutes past ten last night, of about an hour's duration; immediately after which she went to sleep; and slept well and perspired much, all night, with very little heat or thirst. Her pains in the morning were nearly as yesterday; the sickness, and heat in her throat, continued; and the eruptions were increased, particularly about her breast and mouth.

She had the hickup for about five minutes, at half past nine in the morning; and between eleven and twelve she had two fits, each of which lasted

about five minutes, but they were unaccompanied with delirium or hickup.

Her breast was exceedingly painful all day, and was swelled slightly almost up to the clavicle. The whole of the swelling was painful; but especially about the nipple, which was pointed, soft, and red, as it had always been in a less degree; and round which the glands were enlarged, and hard. The pain in her back not only continued to be troublesome after making water, but was now become constant. Her head was easier; but she complained of a heavy pain over her eyes. Her throat was pretty well in the afternoon; and though her stomach was in some pain, it was less in pain than in the morning; and she ate and drank very well. She had a considerable roughness all over the skin, which had

increased, and spread much since yesterday.

The *pultice of green cicuta* seeming to increase the pain in her breast, about five o'clock this afternoon it *was removed*; and instead of it, *soft lint was applied, moistened with cream of lead.* And she was ordered *to take every three hours, as usual, four grains of flowers of zinc, four grains of calcined magnesia, and five drops of laudanum, with a table-spoonful of Mindererus's spirit.*

At seven o'clock in the evening commenced a spasmodic fit of an hour and quarter, succeeded by a delirium of three quarters of an hour.

At ten o'clock at night the pains of her breast, stomach, and back, were less troublesome than they had been all day. The bad taste in her mouth was as usual. She had neither thirst

nor fever; seemed composed, and better, and inclined to sleep.

She had a plentiful stool in the evening.

Pulse 76, at eight o'clock in the morning; 104, at half past eleven; at half past five, 98; and 100, at bedtime.

Friday 18.

54. She slept well all night, without fever or complaint of any kind, excepting pain on making water. All her pains were better in the morning. The eruption was nearly the same.

At three o'clock in the afternoon her back was not quite so easy. Her breast appeared better, and was less painful when touched. She had no pain of her side, stomach, heart, or throat; but the disagreeable taste

in her mouth continued. She could swallow water, or any other liquid, freely; and did not experience the smallest uneasiness on hearing the noise of pouring water.

She was taken with a fit at half past nine in the evening, which lasted about ten minutes; after which she complained of much pain at her heart, which continued for about ten minutes, and was succeeded by the hickup, which was very troublesome for half an hour. She was afterwards free from all her pains, excepting of her breast and back, which were not worse than they had been all day. The nipple and breast were less inflamed and tense. She was free from heat and thirst, and quite sleepy.

She had a large stool in the afternoon.

Pulse 80, at seven in the morning; and 100, at ten at night.

SATURDAY 19.

55. She slept from two o'clock in the morning till seven without waking; made water twice before she went to sleep, without pain. Her breast was more in pain this morning than yesterday; but its external appearance nearly the same. The pains of her back and eyes were very inconsiderable; and all other pains had ceased. The eruption seemed going off.

From half past nine till ten o'clock she was troubled with a hickup; when the pain in her breast increased, and she felt some little pain at her heart, stomach, and back.

At six o'clock in the evening the pains in her breast, back, stomach,

and eyes, were increased; her throat was perfectly easy; but she felt pain all over her; and the pain in making water was returned. Was free from heart-burn, which she said she was always most troubled with in the morning; but had still the sourness in her mouth.

She was ordered to take *five grains of flowers of zinc, five grains of calcined magnesia, and five drops of laudanum, with a table-spoonful of Mindererus's spirit, every three hours, as usual.*

She had two slight fits of five minutes each, between nine and ten o'clock in the evening, without any subsequent delirium. The pain in her breast, back, and stomach, worse; that across her eyes nearly the same; she had no fever, and seemed inclined to perspire.

Pulse 92, at seven o'clock in the

morning; 100, at six in the evening; and 92, at ten at night.

SUNDAY 20.

56. She slept with little intermission, and no complaint, from eleven o'clock at night till eight in the morning.

Her pains in the morning were nearly the same as yesterday, her throat was free from complaint, she was cool, and had no remains of fever.

At one o'clock in the afternoon I found her complaining much of her breast, though the swelling was considerably abated. It was then chiefly confined to a small space round the nipple; excepting that it extended towards the axilla.

She complained also of much pain in her head and back.

Four leeches were ordered to be applied immediately to her temples; and a common purging clyster to be injected in the evening, if she should not have a stool before that time.

The leeches performed well; the clyster produced two small stools; and at ten o'clock at night her head, back, stomach, breast, and heart, were better. The disagreeable taste in her mouth was still the same. She was sleepy, and had neither heat nor thirst.

At eleven o'clock she was taken with a fit. She was at first stiff for about five minutes; then violently delirious for three hours; and again stiff for an hour; after which she went to sleep.

Pulse, at eight in the morning, 84; at one in the afternoon, 98; at five, 96; and 88, at ten at night.

MONDAY 21.

57. She slept from the time when the fit left her last night till eight o'clock in the morning. She complained, when she awoke, of much pain in her head and heart.

The pain of her breast was as usual. She made water in the night without pain. Soon after she awoke in the morning she became delirious. Her attention was fixed, as in former fits, for the most part upon one object. In this state she continued till ten o'clock. She had another fit from about half past twelve, till half past one. Had no more fits or stiffness during the rest of the day; but was at times delirious; and was so at ten o'clock at night, when she laughed immoderately, and talked a good deal. She complained much, in

the course of the day, of her breast and heart; and a little of her head and stomach.

The eruption had quite disappeared. She had two plentiful stools.

Pulse, about eight o'clock in the morning, 100; at two in the afternoon, 109; at seven in the evening, 97; and 100, at ten at night.

TUESDAY 22.

58. She had a fit last night, from eleven o'clock till near twelve; and soon after another, which continued till about one; soon after which she settled to sleep, and slept with little intermission till seven o'clock in the morning. About eight she said that her heart and breast hurt her very much; that her back, stomach, and head, were nearly as they had been

yesterday; and that her throat continued perfectly well.

At twelve o'clock the painful sinking at her heart, and the pain in her head and breast, were better, though still considerable; the pains in her back and stomach were gone; her head was clear, and every way better. She continued, as she had done for some time, free from all complaint in her throat; to eat and drink without pain or hesitation; and to be unaffected by the pouring or noise of water; and though she did not usually drink water, could drink it without trouble or reluctance. The tension and pain of the breast was somewhat abated.

She was ordered to take *seven grains of flowers of zinc, five grains of calcined magnesia, and seven drops of laudanum, every six hours, with four table-spoonfuls*

of the febrifuge decoction; and as the fever seemed to be entirely gone, she was again allowed to have a little red-port wine now and then in sago or panada.

At seven o'clock in the evening she had had no fit since that which had commenced at twelve the night before. Her breast, stomach, and back, were more in pain than in the morning; but she had no other pain, or complaint, excepting the sour taste in her mouth.

She had a fit about eight o'clock, which lasted near an hour and a half. At ten she was quite sensible, free from fever, less in pain, and much inclined to sleep.

She had a copious stool in the afternoon.

Pulse, about eight o'clock in the morning, 80; at noon, 82; at seven in

the evening, 92; and 88, about ten at night.

WEDNESDAY 23.

59. She had no fit, stiffness, or delirium, in the night; slept well from twelve o'clock; made much water, without pain; had less pain in her breast, heart, stomach, and head; and had scarcely any in her back; was sensible, free from thirst and fever.

At half past two, I unexpectedly found her very busily engaged in play with other patients, under the piazzas behind the house. Her breast was much better; there being but little remains of swelling, excepting just about the nipple, round which there was a slightly florid circle. Her head, and every other part, was free from pain; and the sinking at her heart was

entirely gone. Her pulse 100; but probably accelerated by the activity and agitation of play, in which she had appeared very eager and animated; and the hurry of coming hastily up stairs into the ward to be examined.

She was ordered to take *three spoonfuls of the febrifuge decoction with each bolus.*

At seven o'clock in the evening she felt more pain in the heart, head, and breast, than in the morning; had a slight pain in her back on making water; but her throat continued well; and her appetite was good. She was then, and had been all day, perfectly sensible; but at eight o'clock was seized with a fit, which lasted an hour and half; and at eleven was delirious.

She had a plentiful stool in the evening.

Pulse 84, at eight o'clock in the morning; 100, at half past two in the afternoon; 105, at seven; and at eleven o'clock at night, 96.

THURSDAY 24.

60. She had another fit about half an hour past midnight, which lasted near an hour and half. Her rest was afterwards disturbed by much pain in her left breast and side; to which were added in the morning, the pains of her head, heart, and back, the last of which was increased when she made water. The breast bore nearly the same appearance as yesterday.

At one o'clock in the afternoon, all the pains remained, but were much abated. The pain in her side was dif-

ferent from any she had ever complained of before, and distinct from that which she had sometimes called a pain, and sometimes a sinking at her heart. It had been very sharp at each inspiration; and though at this time it was much abated, it was not quite gone.

The boluses were ordered to be prepared with *eight drops of laudanum, and to be taken every four hours, with three spoonfuls of the febrifuge decoction. A perpetual blister was also directed to be applied to the nape of the neck.*

She was very noisy, and delirious, from seven till eight o'clock in the evening; but had no fit till ten o'clock, when she was seized with one, in which she was stiff, and her limbs were contracted for three quarters of an hour, and she was afterwards delirious for

about ten minutes. She complained of very little pain, but that of the blister, all the evening.

She had two plentiful stools in the afternoon.

Pulse 92, at eight o'clock in the morning; at half past one in the afternoon, 81; at eight in the evening, 106; and 100, at eleven at night.

Friday 25.

61. She slept with little interruption from eleven o'clock last night till near eight this morning; and complained but little of pain.

About noon her head ached a good deal; but she felt no other pain, excepting a slight one in her breast. She was delirious from one till two in the afternoon.

At six o'clock she was very sick, and

vomited; and complained of more pain in her stomach, back, and head. Her breast continued easier, and looked better.

She was delirious from seven o'clock till near eight; and afterwards stiff and contracted for almost an hour.

At ten o'clock she had but little pain; the nausea remained, though she had not vomited again; she was quite sensible; sleepy, and inclined to perspire.

She had a plentiful stool in the evening.

Pulse 96, at eight o'clock in the morning; 86, at noon; 92, at six in the evening; and at ten at night, 98.

SATURDAY 26.

62. She slept from eleven o'clock last night till three this morning. She

then became rather hot and feverish, and continued so for a short time; after which she perspired plentifully till six o'clock.

After seven she had two slight fits, of less than five minutes each. She complained in the morning of much pain in her back; of some pain in making water; and a slight pain in her head, and across her eyes.

Between two and three her head ached a good deal; and the pain across her loins was considerable; but she had no other pain, excepting a very trifling one in the nipple, which appeared a little puffy, but not inflamed, and was nearly well. She was still sick.

She was ordered to take immediately *eight grains of ipecacuanha;* and to take *ten drops of laudanum in each bolus.*

The vomit operated very well; relieved her stomach much; and abated the sour taste in her mouth. The pain of her back, head, and across her eyes, continued nearly as before; her breast pained her very little; and her side not at all.

At ten o'clock at night she was neither thirsty nor feverish.

Pulse, in the morning at eight o'clock, 80; at six in the evening, 92; and 109, at ten at night.

SUNDAY 27.

63. She slept well the greatest part of the night. She had neither fit nor delirium, and was pretty easy all day, excepting a slight pain in her back, in her head, and across her eyes, which were rather more considerable in the afternoon than they had been in the

morning. She had no pain in her breast, and though she experienced some little nausea, and a slight sourness in her mouth, they were much less than before she took the emetic.

At ten o'clock at night she was very sleepy. She had a plentiful stool early in the morning, and another in the evening.

Pulse, at eight in the morning, 98; at four in the afternoon, 104; and 106, at ten o'clock at night.

MONDAY 28.

64. She had some delirium last night, from eleven till twelve o'clock; after which she rested well till eight o'clock in the morning.

She had no pain all day of any kind, excepting in the most inconsiderable degree; and that only across her eyes,

and in her back; had no fever whatever; and was quite composed and rational. She was ordered to take *seven grains of flowers of zinc, five grains of calcined magnesia, and eleven drops of laudanum, every four hours, with four table-spoonfuls of the febrifuge decoction.*

She had a stool in the afternoon.

Pulse 100, at eight o'clock in the morning; 108, at two in the afternoon; 116, at eight in the evening; and at eleven at night, 108.

TUESDAY 29.

65. She slept well the whole night, without fit, delirium, or fever; and had no complaint all day, excepting a slight head-ach, and scarcely any pain in her back; both which increased a little about two o'clock in the afternoon, but soon subsided again, and

almost ceased. She was rational and cheerful.

She was ordered to take *the same boluses prepared with twelve drops of laudanum, every three hours, together with four spoonfuls of the febrifuge decoction.*

She had a stool in the evening.

Pulse, at eight, 91; at two, 89; and at ten, 100.

WEDNESDAY 30.

66. She had a very good night; and appeared well all day, having so slight a pain in her head and back, as was scarcely worthy of notice; though it rather increased in the afternoon, and in the evening was accompanied with a trifling pain in her stomach, which she only experienced occasionally,

when she took a deeper inspiration than ordinary.

She was this morning put upon COMMON DIET; and ordered to take *thirteen drops of laudanum in each bolus.*

She had a stool about the middle of the day.

Pulse, at eight, 80; at twelve, 86; at seven, 80; at ten, 86.

THURSDAY 31.

67. She had a hickup, and complained much of pain, from half past eleven till one o'clock; when she dropped asleep, and slept well till seven in the morning. At eight o'clock she complained that the pain in her back, and across her eyes, was increased; and that she felt much pain in her left side when she drew her breath.

At three o'clock in the afternoon the pain in her side was gone; but her head ached very much, and her back a good deal. She had eaten a hearty dinner, and dozed for some time after it.

Four leeches were ordered to be applied to her temples; and fourteen drops of laudanum to be taken with each bolus.

She had three slight fits while she was leeching; the longest of which did not exceed a quarter of an hour.

She bled well; and at seven o'clock in the evening had no pain any where, but from the blister in her neck, which had been renewed. She continued free from pain all the evening.

She had a stool early in the afternoon.

Pulse, at eight, 88; at three, 86; at seven, 95; and at ten, 93.

JUNE.

Friday 1.

68. She slept well all night, perspired copiously, and was free from pain; and continued quite easy, and free from complaint, excepting an inclination to sigh now and then, till one o'clock in the afternoon, when she had a very slight return of pain in her head, which however soon abated. But in the evening she had a fit, in which she lay senseless from nine o'clock till a quarter past ten, but had no delirium. After the fit she still complained of some pain in her head, to which was then added a pain in her back.

She had a moderate stool in the middle of the day; and a plentiful one about six o'clock in the evening.

Pulse, at eight, 84; at half past one, 102; at seven, 84; and at eleven, 100.

SATURDAY 2.

69. She was in a fit from midnight till half past two in the morning. From that time she slept well till eight o'clock. She complained more of the pain in her head in the morning than over-night; but not so much of pain in her back. In the middle of the day the pain in her head was still considerable; but she had no other pain, excepting what arose from the blister; and the pain in her head gradually abated, and was very trifling in the evening. She then, however, complained of soreness at her stomach; and had some slight pain in her back.

She was perfectly free all day from fits, delirium, and fever.

Instead of the febrifuge decoction, she was ordered to take three table-spoonfuls of decoction of common Peruvian bark, with each bolus.

She had a stool in the afternoon.

Pulse, at eight, 84; at two, 108; at four, 84; and at ten, 100.

SUNDAY 3.

70. She complained of much pain in her stomach and belly, from one o'clock in the morning till three; was restless till five; and slept very well from that time till seven. After she awoke, the pains in her back and head were much worse; but she had no other pain. The *volatile liniment*, which was applied plentifully to her stomach and belly, externally, and assisted with a warm flannel, during the violence of the pain, removed it from those

parts to her back; at least, when the pain ceased in the former parts, one commenced in the latter.

At six o'clock in the evening her head was better; she had had two stools; the pain in her stomach and belly was entirely gone; but had left a soreness, and heat, internally, and some thirst, though her body, externally, was of a natural temperature. On examination, the stomach and belly were found considerably distended, hard and painful to the touch. She had taken her food, however, very well.

The *flowers of zinc, and decoction of bark, were then omitted; and she was ordered to take a draught, containing five grains of calcined magnesia, fourteen drops of laudanum, in an ounce and half of water, every four hours; to have a*

common purging clyster injected as soon as possible; to take half an ounce of castor-oil immediately, and to repeat the same dose occasionally, till she should have two or three stools; to have a large blister applied to the epigastric region; and if these medicines and applications should not soon relieve the heat and soreness of the belly and stomach, that eight ounces of blood should then be taken from the arm.

At ten o'clock in the evening, the clyster, with one dose of castor-oil, had procured one large stool; she had slept for an hour; the swelling and soreness of her stomach and belly were considerably abated; she had no pain in any other part; was free from fever; and in a moderate perspiration.

Pulse, at eight, 88; at six in the evening, 102, and rather full and hard; and at ten, 102.

Monday 4.

71. She slept all night. In the morning the heat, soreness, and swelling of her stomach were nearly gone, and she was free from all other pain or complaint, excepting a very slight pain across her eyes in the morning, which soon went off.

She remained all day well; her appetite was good; but she was exceedingly sleepy, probably in part owing to her having scarcely slept at all on Saturday night; but chiefly to her being now more affected by the laudanum, in consequence of her entire freedom from pain and spasm.

About ten o'clock, however, in the evening, she became restless, thirsty, and feverish; her head, eyes, and back, were in some degree of pain; and she

had a good deal of pain from a small hard tumour, which had suddenly appeared, and was now first observed, just above the right clavicle.

About half past ten she was very sick; and vomited about a pint of green fluid, which relieved her.

She had seven stools between two o'clock in the morning, and half past ten at night; without any farther use of the clyster, or castor-oil, both of which were ordered to be repeated if necessary.

Pulse, at eight, 92; at one, 100, full and soft; at five, 110; and at ten, 118.

Tuesday 5.

72. She slept well from eleven o'clock at night till eight in the morning. The tumour near the clavicle

was become larger, harder, and more painful; she had a slight pain across her eyes; had scarcely any swelling, or soreness, in her stomach; but was rather hot and thirsty.

At one o'clock she had no other complaint but sleepiness, with a very slight giddiness, and sickness, all probably owing to the laudanum; the pain from the glandular tumour, which however was not very troublesome, excepting when she moved, or when it was touched; and a very trifling degree of fever.

She was ordered to *take an ounce and half of nitrous decoction, with five grains of calcined magnesia, and twelve drops of laudanum, every four hours; and to have an emetic in the evening, if the sickness should continue troublesome.*

In the evening at seven o'clock the

sickness was abated, without the assistance of an emetic; but the pain across the eyes was rather worse, and the pain in her back was returned.

At ten o'clock she had just had a slight fit, was then rather delirious, thirsty, hot, and feverish; but free from sickness, and from all pain, but that arising from the tumour in her neck.

By accident she received a scratch on the fore-finger of the right hand, during the fit, from the apothecary's knee-buckle, on the very part which had been wounded by the bite of the dog.

Pulse at eight, 92; at one, 100; at seven, 90; and at ten, 105.

Wednesday 6.

73. She was delirious till twelve o'clock; from which time she slept

soundly, and perspired moderately, till eight o'clock in the morning; when the tumour appeared to be somewhat diminished, and less painful when touched; and she was free from all other pain, from sickness, and from fever. But the delirium came on again soon after, and continued about two hours.

At noon she had no pain, or other complaint; and was perfectly collected; but not having had a stool since Monday night, she was ordered to take *half an ounce of castor-oil immediately, and again at the end of four hours, if the first dose should not operate; and her draughts were directed to be prepared with two ounces of nitrous decoction in each.*

At four o'clock the sickness returned, and she vomited about a quart of

green fluid; after which the nausea abated considerably; but she was somewhat delirious, and so very giddy that she staggered when she walked. The first dose of the castor-oil came up when she vomited at four o'clock; as did some every time she repeated it; which she did to the quantity of three ounces before ten o'clock at night, when she was still sick. The emetic was then repeated; and after it a purging clyster was injected. She vomited twice, and had two plentiful stools.

She was frequently delirious during the course of the afternoon; had some trifling hickup, and a bad taste in her mouth; but was free from pain, thirst, and fever.

Pulse, at eight, 88; at twelve, 91; and at ten, 92.

THURSDAY 7.

74. She slept well from one o'clock till eight. Was in the morning free from sickness and giddiness, her head was quite clear, and she had no complaint but what arose from the tumour, which remained unaltered. She continued in this state all day; but at nine in the evening had a fit, in which she was stiff for about a quarter of an hour, and had the hickup at the same time; after which she was delirious for nearly the same space. After the fit, as before, she was free from pain, and without fever.

She had a stool in the morning.

Pulse, at eight, 82; at ten, 91; at six, 88; and at ten, 96.

FRIDAY 8.

75. She had a fit from eleven o'clock till midnight; she then slept till two; when she had another fit of about five minutes duration; and afterwards slept till eight o'clock in the morning.

She had no complaint all day, but of the tumour near the clavicle; the pain of which rather increased in the evening, and at night was accompanied with a return of the pain in her head and eyes.

She had a clyster about nine o'clock at night, which procured three plentiful stools.

Pulse, at ten, 88; at twelve, 84; at six, 90; and at ten, 93.

SATURDAY 9.

76. She slept well almost all night,

without complaint; the pain of her head and eyes still remained in the morning; as did that of the tumour, which was considerably enlarged.

At five o'clock in the afternoon the pain of her head and neck were both increased; the tumour was much larger; there had been an accession of fever about half an hour before, and she was hot and thirsty. She had eaten her dinner very well.

At seven the pain of her head was rather easier; that of her neck very troublesome; and the gland and surrounding parts much swelled. She had a good deal of heat and thirst. She had vomited about an hour before.

The cream of lead was ordered to be applied to the inflamed parts.

At ten o'clock she was free from

sickness; the pain of her head was better; but that of the tumour was worse.

Pulse, at eight, 96; at five, 120; at seven, 120; and at ten, 120.

SUNDAY 10.

77. She continued very hot and thirsty till midnight; after which she perspired, and her thirst abated. At five o'clock in the morning she had a fresh accession of fever. The tumour of her neck increased in size and hardness, and was more in pain. But she felt no other pain of any kind.

At five o'clock in the afternoon the swelling of the neck was much increased, considerably extended, red, hot, and so very painful that she could scarcely bear the slightest touch; she had a good deal of fever.

Six leeches were applied to the tumour; and afterwards an emollient cataplasm.

The leeches performed well, the tumour bled much, and the pain was considerably relieved. In the evening she complained of an increase of the pain in her head, and was still hot; but she went to sleep about nine o'clock, and was still asleep at ten.

The wound in her finger was perfectly healed.

She had a purging clyster in the morning, which procured one small, loose stool, about an hour after; and another clyster in the evening, which at ten o'clock had produced no effect.

Pulse, at eight o'clock, 123; at three, 123; at five, 118; and at ten, when she was asleep, 120.

MONDAY 11.

78. She lay awake some time, between ten and twelve o'clock; when she again dropped asleep, and slept till six o'clock in the morning; she perspired much during the night; her tongue was white in the morning; she had no thirst; and no pain but that in her neck.

At half past one o'clock in the afternoon she was rather warm, but did not perspire; the swelling of the neck was more circumscribed, and less painful; but the central part, though less painful than yesterday, was still very painful, swelled, and florid; and she complained that light made her eyes ache; a symptom which was probably owing to their being rendered tender and irritable by the fever.

At five o'clock she had more heat and thirst, but somewhat less pain.

At ten o'clock the heat and thirst were abated; and the pain of the tumour much easier; but a fresh glandular tumour was perceived, for the first time, on the left side of her neck.

She had three small stools in the night, before twelve o'clock; and a plentiful one in the evening, in consequence of a clyster.

Pulse, at eight, 116; at half past one, 117, full, and rather hard; at five, 120; and at ten, 106.

TUESDAY 12.

79. She slept from twelve o'clock till near eight; perspired plentifully; was free from fever; and her eyes were less affected by light.

At one o'clock in the afternoon the

swelling on the right side of the neck was yet more circumscribed ; but hot, red, and still very painful : the gland on the left side not increased, not very painful, and not at all affecting the surrounding parts. The fever was returning; and her eyes ached more, and bore the light less, than in the morning.

A clyster was injected in the evening; which had produced no effect at ten o'clock; at which time she was hot, and her tongue was white, but she was not thirsty.

The light of a candle now affected her less than day-light had affected her in the afternoon.

Pulse, at eight, 89; at one, 112; and at ten, 100.

Wednesday 13.

80. She slept well the whole night; and perspired moderately after twelve o'clock, when the fever left her. She was rather hot at eight o'clock in the morning; but not much so; and all symptoms were better.

At two o'clock in the afternoon, the pain of her neck, on the right side, was much abated; the tumour less extensive, but hot, hard, and painful to the touch; that on the left side was neither painful, nor considerable, but simply an indolent, indurated gland; light gave but little pain to her eyes, which appeared cool, and free from all tendency to inflammation, or disposition to water; and she had no pain in her head; nor any elsewhere, but that of her neck above mentioned. Her

skin was soft, and not very hot; but her tongue was rather white.

The draughts were ordered *to be prepared with only eleven drops of laudanum; and a clyster to be injected in the evening.*

At ten o'clock at night she was in every respect much better.

She had two small stools from the clyster last night; and one large one after that which was injected this evening.

Pulse, at eight, 96; at two, 101; and at ten, 92.

THURSDAY 14.

81. She slept well; had very little fever all night, and perspired moderately; she had not much pain in the tumour during the day; but complained of pain in her back in the

afternoon; which was increased at ten o'clock in the evening, when she also complained of more pain in the tumour, and of more pain in her eyes from candle-light; but was neither feverish nor thirsty, and perspired freely.

She had a clyster about seven o'clock in the evening, which produced three plentiful stools.

Pulse, at eight, 88; at four, 90; and at ten, 92.

Friday 15.

82. She slept well all night; was free from fever; and perspired moderately. The pain on the right side of her neck was much abated; the tumour circumscribed, elevated, red, and containing matter. Her eyes were better; and the pain in her back was

quite gone. Her skin was soft, perspirable, and of a natural heat. She was brisk and cheerful all the afternoon; and continued free from complaint at ten o'clock at night.

A dog happening to come into the room while I was examining her this afternoon, she expressed considerable apprehension; as I had frequently observed her to do before, on similar occasions; but when she was assured that he was not a strange dog, and was known to be very good-natured, and would not hurt her, she seemed inclined to play with him; and, with some little apprehension, was prevailed upon to stroke and caress him.

She had a plentiful stool about eight o'clock.

Pulse, at eight, 86; at one, 88; and at ten, 88.

SATURDAY 16.

83. She slept well the whole night, had no fever, and perspired moderately. She was free from pain, lively, and active all day; walked much in the garden, and bore it without fatigue. Her appetite, which had been bad since the commencement of the fever, and had rarely suffered her to take any but fluid nourishment, and with reluctance had admitted any thing so solid as panado, hasty-pudding, or bread in her milk or broth, was to-day pretty good, though it was still indisposed to every thing but spoon-meat.

At nine o'clock at night she had a fit, which lasted for half an hour. It was entirely spasmodic, and was nei-

ther preceded nor followed by delirium.

At ten o'clock she was again very well; but the tumour in her neck was larger, more inflamed, and more painful to the touch.

She had a clyster in the afternoon, which procured two stools.

Pulse, at eight, 90; at three, 98; and at ten, 102.

SUNDAY 17.

84. She slept well; had some degree of fever; but perspired during the greatest part of the night. Was remarkably brisk and well all day; but complained a good deal of pain in the tumour on the right side of her neck, which was larger, fuller of matter, and seemed likely to break soon.

The *draughts* were ordered *to be prepared with thirteen drops of laudanum in each.*

She had two stools.

Pulse, at eight, 84; at five in the afternoon, after walking a good deal in the garden, from which she was just returned, and without the smallest degree of fever, 110; at ten at night, when she was in bed, and asleep, 96.

MONDAY 18.

85. She slept well, perspired a good deal, her tongue was still white, but she had no fever or thirst. She had no other complaint but of the pain in her neck. The skin of the tumour was become very thin; and the matter seemed, by its fluctuation, to be in considerable quantity.

She ate a small quantity of com-

mon pudding; which was the first solid food she had taken since the inflammation in her neck, and consequent fever, had become considerable.

Her breast, having been but little affected, had not lately been mentioned. There was now no pain or hardness remaining.

She was cool, and free from perspiration, in the day-time, and in good spirits. Her eyes bore the strongest light, even that when the sun shone, without uneasiness.

She had one stool in the night, and two more in the day-time.

Pulse, at eight, 86; at half past one, 80; and at ten, 88.

Tuesday 19.

86. She slept a good deal in the night, and perspired moderately;

but was at times restless and uneasy, from the pain in her neck.

During the day she was in every respect as during the preceding day.

She had two stools.

Pulse, at eight, when she was asleep, 72 ; at one, 80 ; and at ten, 82.

Wednesday 20.

87. She was restless though sleepy, till four o'clock in the morning; the tumour being more painful than usual. After four she slept very well. She perspired freely all night. Her tongue was still rather white.

At half past four o'clock in the afternoon the tumour was opened, and discharged about an ounce of good matter. In the space of about an hour after she fainted away six or seven times, though she bore the opening of

the tumour perfectly well. After the matter was discharged, the tumour became quite easy and cool.

She had two stools.

Pulse, at eight in the morning, 80; and at ten at night, when asleep, in which state she had been for half an hour, 80.

THURSDAY 21.

88. She slept well, and perspired freely the whole night; was cheerful, active, and free from pain, heat, and perspiration, all day; and walked a good deal in the air. The tumour discharged very little, had no appearance of inflammation; and gave but little pain when pressed. She took her food, both fluid and solid, pretty well. She ate about six ounces of boiled beef in the day.

She had two stools.

Pulse, at eight in the morning, 72; and at ten at night, 66.

FRIDAY 22.

89. She had slept well all night, and perspired but little; was free from pain or complaint; and the tumour had ceased to discharge. Her appetite was still improving.

She had no stool.

Pulse, at eight, 68; and at ten, 70.

SATURDAY 23.

90. She slept well, and continued free from complaint; but while she was walking in the gallery, between eight and nine in the morning, and as she thought entirely alone, she was alarmed by another girl, who came unexpectedly and suddenly behind her,

and the fright threw her immediately into a spasmodic fit, in which she remained for near an hour. Soon after ten she had another of the same kind, which lasted about a quarter of an hour.

She perceived her sight to fail, before the last fit came on.

She had two stools.

Pulse, at eight, 70; at four, 80; and at ten, 80.

SUNDAY 24.

91. She slept well, and perspired moderately all night. The place where the tumour had been was entirely free from pain; but discharged at the opening, when moderately pressed, a drop or two of watery fluid. She was brisk and well, but made very little urine.

She was ordered *to take an ounce of*

the decoction of common Peruvian bark, an ounce of nitrous decoction, five grains of calcined magnesia, and twelve drops of laudanum, every four hours.

She had two stools.

Pulse, at eight, 64; at half past five, 70; and at ten, 70.

MONDAY 25.

92. She slept well; did not perspire so plentifully as she used to do; but had a perceptible moisture on her skin. The place in her neck was rather swelled and hard, and discharged an increased quantity of watery fluid, but was free from pain. A small fungous excrescence appearing, a caustic was applied.

She was cheerful and brisk; walked a good deal in the air in the course of the day, was entirely free from sensi-

ble perspiration; her appetite was good; and she made plenty of urine.

She had one stool.

Pulse, at eight, 64; and at ten, 72.

TUESDAY 26.

93. She slept well, without perspiration; was free from pain; the discharge from her neck was very trifling; she made plenty of urine; was cheerful and active; and had a copious stool.

She was ordered *to take only eleven drops of laudanum in each draught.*

Pulse, at eight, 61; at one, 64; and at ten, when asleep, 72.

WEDNESDAY 27.

94. She had a good night, without perspiration; and was, in every respect, as on the preceding day.

She was ordered *to take only ten drops of laudanum in each draught.*

She had a plentiful stool.

Pulse, at eight, 64; and at ten, when asleep, 70.

THURSDAY 28.

95. She slept well all night, and perspired a little. The place in her neck was softer, and the discharge very trifling. She was brisk and lively; said she had never been better in her life, and ate the COMMON DIET of the house.

The *dose of laudanum was reduced to eight drops.*

She had one stool.

Pulse, at eight, 62; at one, 76; and at ten, 80.

FRIDAY 29.

96. She slept well; was free from complaint; took a good deal of exercise; was ordered *to take an ounce and half of decoction of bark, half an ounce of nitrous decoction, four grains of calcined magnesia, and six drops of laudanum in each draught.*

She had two copious stools.

Pulse, at eight, 70; at one, 68; at ten, when she had been asleep an hour, 74.

SATURDAY 30.

97. She slept well. Her neck was quite healed; but there was some little remaining hardness. She *went into the cold bath at eleven o'clock;* was very comfortable after it; *and was ordered to go in every morning about the same*

time. The dose of laudanum was reduced to five drops.

She had two plentiful stools.

Pulse, at eight, 68; at two, 90; and at ten, when asleep, 86.

JULY.

SUNDAY 1.

98. She slept well, and continued free from complaint; but had the hickup for about twenty minutes between eleven and twelve o'clock at night.

Her draughts were ordered to consist of *two ounces of decoction of bark, three grains of magnesia, and three drops of laudanum.*

She had three stools.

Pulse, at eight, 78; at one, 75; and at ten, 80.

MONDAY 2.

99. She slept well. Her neck was quite well, her appetite good; and she was free from all complaint. She was ordered *to take a draught only once in six hours.*

She had one stool.

Pulse, at eight, 76; at half past four, 75; and at ten, when asleep, 72.

TUESDAY 3.

100. She had a very good night; continued perfectly well; pulse 72; and,

Was this morning discharged,

CURED.

AFTER her discharge, excepting a slight lowness of spirits, and an inconsiderable pain in her head, each only for a few hours, at two several times, she continued perfectly well till the *twenty-seventh* of August following; when she had a good deal of headach, much pain round the nipple of the left breast, a pain and hard swelling of the stomach, and a slight delirium for a short time in the night: on the twenty-eighth she was seized with a sudden pain at her heart; which was succeeded by a spasmodic fit of a quarter of an hour's duration: but all these complaints were soon relieved, and on the *thirty-first* they entirely ceased.

From that time she continued perfectly well till the eighth of October, when she had a slight return of the pain in her stomach and head. On the *fifteenth* of the same month, some pain still remaining in her head, she was sent to the Infirmary, to have four leeches applied to her temples; during the application of which she had a slight fit. In the evening of the same day, about eleven o'clock, she awoke out of her sleep in a fright, and continued terrified and delirious in some degree, for three quarters of an hour; had then a spasmodic fit for about the same space of time; after which she dropped asleep, rested well, awoke composed, was rather dull and languid the next day, but from that time continued perfectly free from complaint till the fifteenth of January

1793, in the morning; when, being sent on some errands, and not performing them so well as she was expected to have done, her mother chid her with some warmth: immediately she was perceived not to be quite clear in her head; she laughed without appearing to know why; and ran about so wildly, and as if bewildered, that her mother with difficulty could keep her still and quiet. Towards the evening she grew sleepy; she became afterwards quite composed and steady; and had no remaining appearance of disorder.

Excepting in these instances she has been uncommonly well ever since she was discharged from the Infirmary. Her mother says she was never better in her life.

She continued to drink *red port wine*,

from the time of her leaving the Infirmary till about the end of the year 1792. At first she drank two glasses daily, and afterwards only one. But she used no medicines whatever; excepting that at the time of her indisposition, from the *twenty-seventh* of August to the thirty-first, she took *gum pills*, with *laudanum*, and *camphor julep*; the *purging mixture* occasionally; and had *volatile liniment* applied to her stomach; that on the *eighth* and *ninth* of October she took *a few gum pills;* and that four leeches were applied to her temples on the *fifteenth* of the same month.

HAVING thus given an exact and faithful narrative of the symptoms of the case, and of the method of treatment, from the commencement of the complaint to its happy termination; in which I have left out nothing which appeared to be of the smallest importance; choosing rather to become tedious by a too scrupulous minuteness, than defective, or obscure, by a laboured conciseness; I shall not trouble my reader with a multitude of observations which will occur spontaneously to the judicious and intelligent; but shall satisfy myself with adverting to a few circumstances, which may either need explanation, or seem worthy of particular attention; and with mak-

ing a few remarks, which may tend to throw some light upon the nature, promote the cure, and facilitate the prevention, of this violent and unmanageable disorder.

The time of appearance of the *dread of water* after the bite, not only observes no certain period, but takes a very extensive range; the earliest period of which we have any account being the *third day* *; and the latest protracted to several years. CÆLIUS AURELIANUS † says a *year*, or *more:* Dr. FRIEND ‡, in his History of Physic, mentions an instance, from ACTUARIUS, of seven years; and MORGA-

* CÆL. AURELIAN. *Acut. Morb.* lib. iii. c. 9. p. 219.

† Ibid.

‡ *Histor. Medicinæ*; *Oper.* p. 453.

GNI * believes, from authority, that the poison may lie dormant for *twenty*, if not for *forty* years; but the most common period, according to CÆLIUS AURELIANUS †, is *forty*, and according to Dr. MEAD ‡, *thirty* or *forty* days. In the present case, the appearance of disorder was very early after the bite; but it long remained doubtful what was its real nature, under the supposition that a *dread of water* was an essential and idiopathic symptom; since this did not clearly show itself much before the most usual period of thirty days, mentioned by Dr. MEAD. For the first slight symptoms of complaint were on the *seventh* day; these were

* *De Sedibus & Causis Morb.* lib. i. epist. 8. n. 21. p. 53.

† Ibid.

‡ *On Poisons*; Works, vol. i. p. 78.

succeeded by a remission on the *eighth*, by a more violent agitation on the *ninth*, and by some doubtful appearances of a dislike to water on the *tenth*. After this, the symptoms all remitted of their violence; not the smallest tendency to a dislike of water discovered itself from the tenth till the *twenty-second* day; when undoubted symptoms began to show themselves; which became strong and striking on the *twenty-fourth*.

The great length of time which elapsed before the disorder was entirely subdued; the variety of other symptoms besides the *dread of water*, or, as Dr. MEAD more properly calls it, the *difficulty of drinking**; as pains in various parts, spasms both partial

* *On Poisons*; Works, vol. i. p. 84.

and universal, hickup, fever, inflammation, glandular swellings, cutaneous eruptions, and some other complaints; the various changes and combinations of symptoms; the frequent increase of symptoms, after an apparent cessation, which seemed to promise a more speedy conclusion of the disorder; are circumstances worthy of observation, suitable to the character of a nervous affection, and which may tend to enlarge our views of its pathology, and to prepare the way, in conjunction with past and future observations, for such nosological and therapeutical distinctions, as may hereafter enable us better to ascertain canine madness in the human species, in all its stages and varieties; to vary the method of cure, as circumstances may require; and to judge, with some degree of probabi-

lity, if not of certainty, when it is curable, and when beyond the power of art. This may by some be thought to be a visionary prospect. But notwithstanding the ominous forebodings of past experience, I cannot but look upon it as one day to be realized. Who, that had only witnessed the ravages of the small-pox, and the venereal disease, two or three centuries ago, would have imagined that they were hereafter to become as mild and manageable as most other diseases; that the latter was scarcely ever known to destroy life; and the former, in skilful hands, not very often?

From the time of CÆLIUS AURELIANUS, to the present day, medical writers have very generally considered spasm as an essential symptom of this disorder; but there are few who have

viewed it as so purely a nervous complaint as it seems in reality to be. Too many have had notions of the existence of tumour and inflammation in the throat; and of its bearing some fancied resemblance to the common quinsy; of acrid matter slipping down from the throat to the stomach, and thus producing the distressing sensations so conspicuous in that part; of an inflammatory, or of an acrimonious, and even putrid state of the blood; of a fever, of an inflammatory, or of a putrid kind, as circumstances determined, and peculiar to the complaint; all of which have usually, I believe, existed more in hypothesis, and false theory, than in reality; and have been derived rather from imagination than from actual experience.

In the case under consideration there

was scarcely any discernible tumour or redness of the throat; certainly none sufficient to excite pain, much less to produce the difficulty of swallowing, and the consequent convulsions, so distressing to the patient. That the leading and characteristic symptoms were perfectly spasmodic, with a greatly increased irritability and sensibility, is perfectly obvious from the history. That the fever was merely occasional and symptomatic, is pretty certain; and that it was sometimes only accidental, and the consequence of catching cold, or of local inflammation, as of an inflammation in the left breast at one time, and, at another, on the right side of the neck, there can be no doubt. But it seems probable, that the general enlargement, and induration, of the lympha-

tic glands, and particularly of those about the throat and neck; and the inflammation of some of them; were the immediate effects of the canine poison introduced by the bite into the lymphatic vessels. The general roughness of the skin, the miliary and other eruptions, might probably derive their origin from the same source; though perhaps it may be justly queried, whether these eruptions were not partly owing to the frequent exhibition and long-continued use of such large doses of *musk*. Possibly the sour taste in the mouth may be suspected to have originated from, or at least to have been increased by, the same cause; but, as the stomach is always found to suffer much in this disorder, it seems not improbable that the acidity might take its rise from the debility of that

organ, and the consequent imperfect performance of its digestive functions.

Not only spasm, but delirium, has been considered as an invariable attendant on canine madness. The former, I believe, never fails to show itself at some period of the disease; and always accompanies the dread of water; the latter usually makes its appearance at intervals; though in some instances it has been entirely absent. Indeed in several cases, of which we have accounts, there does not appear to have been any delirium, properly so called; or none till the approach of death, when it is not usual for it to make its appearance in other disorders, of which delirium never necessarily, and excepting at their close, rarely even incidentally, makes a part. For I do not, with many writers, both

ancient and modern, esteem what is usually, but improperly, called *a dread of water*, as a symptom of delirium; but think it merely the consequence of those painful spasms, which the attempt to drink uniformly produces; and in some degree the act of swallowing merely, whether liquids or solids; and which, as the disorder increases, the very sight of water, or of any fluid, more or less excites. Nor is the effect of the noise of water, or of pouring fluids, of the sight of a bright and polished surface, as of a looking-glass, or of any white or glaring object, a solid objection to this account of the matter; since they may very well be explained, from the power of association, aided by the great irritability of the body, and the great propensity which the muscles of

the throat in particular possess, and, by sympathy with them, of the whole body, to be spasmodically affected; which will readily dispose them to renew their preternatural contractions, on the sight of things which so nearly resemble, and so forcibly recall the ideas of, what has so often, and so irresistibly, brought on the same contractions before. From the preternatural irritability of the body seems to arise the distressing effect of light, air, and cold, on many persons unhappily suffering under this disorder. Whenever a delirium appears, excepting just before the termination of the disease by death, it is, I believe, entirely nervous, and similar to that which sometimes attends upon other spasmodic disorders.

The fits so often mentioned, and

sometimes described in the above history, assumed four different forms; which sometimes appeared separately, and singly; sometimes more or fewer of them combined, and variously succeeding each other; and not unfrequently all of them, in uncertain succession, in the course of the same paroxysm. These four forms were as follows: Sometimes the fit was simply a delirium, in which, (1) the patient was either merely rambling in talk, or in high spirits, but not inattentive to external objects; or, (2) she was totally lost in reverie, and her attention entirely fixed on some ideal delusion of the brain; or, (3) it was accompanied with violent contention and struggling to obtain some end, which the delusion presented to the imagination; or, (4) it consisted

in general spasm, and rigidity of the whole body, in which all sense, as well as motion, seemed to be lost. From this account will readily be understood what is meant when she is said to be delirious; to have a struggling fit; or a stiff, or spasmodic fit; or when she is said to have had more than one, or all of these, in various order of succession. But when it is merely said that she had a fit, no specific idea can be formed of it, though I believe it generally means a spasmodic, or sometimes, perhaps, a struggling fit. This uncertainty arises from the want of precision in the memorandum made at the time; which cannot now be remedied; and which, indeed, as the fits have been so often discriminated in the course of the narrative, can be of no great importance.

The *dread of water*, as has been already observed, has usually been considered as the *characteristic* symptom of canine madness. But though it is so general, as to be almost universal in the human species, yet we have accounts, of undoubted authority, of cases of this disorder, in which this symptom has never been observed *; as well as of other disorders, in which it has not only appeared, but been very conspicuous. And what is an extraordinary, though an undoubted fact, mad dogs, by whose bite this distressing and terrible symptom is communicated almost as certainly as the infection, to mankind, rarely, if ever, experience it.

The animals enumerated by authors,

* MEAD'S *Mechanical Account of Poisons;* Works, vol. i. p. 85.

as liable to this disorder, are, *dogs*, *cats*, *wolves*, *foxes*, *bears*, *leopards*, *monkies*, *horses*, *mules*, *oxen*, *deer*, *sheep*, *swine*, *domestic poultry*, and *man*. It is, indeed, not unlikely that every quadruped, at least, is capable of receiving, and capable of communicating it. *Dogs* and *cats* are the most common instruments of conveyance in this country; but we have good authority for believing that it has frequently been conveyed by the bite of mad *wolves* and *foxes*, and sometimes even by *man* *.

It is said to have been communicated by a scratch; by the breath; by the saliva taken into the stomach, coming accidentally into contact with a recent scratch, received any way into a wound or ulcer, but especially

* SAUVAGES, *Dissert. sur la Rage*; Chefs d'Ouvres de M. DE SAUVAGES, tom. i. p. 15.

insinuated into a wound by the bite of a rabid or mad animal.

Of the infection by the breath an instance is related by PALMARIUS *, of several children who were seized with the hydrophobia, on the seventh day after taking a farewell kiss of their father, just before he died of this disorder.

That it should be conveyed by a scratch appears highly improbable; and there is reason to believe that it is rarely conveyed by the breath; indeed it is likely that it never can be conveyed in this way, but under very peculiar circumstances, as of a wound in the lip or mouth, or in consequence of a full expiration made by the patient, and the breath, thus strongly

* As quoted by LAYORD, p. 10.

thrown out, received, by a full inspiration, by the person kissing, or otherwise receiving it. It is even doubtful whether the saliva taken into the stomach can produce the disorder, unless there be some sore in the mouth, or in any other part of the passage to the stomach, by which the infection may be admitted.

There are numerous instances in which there is reason to believe that the flesh of rabid animals has been eaten without injury. VEGETIUS * recommends, as an antidote for cattle that have been bit by a mad dog, "to "give them the boiled liver of the "dog to eat; or to make it into balls, "and force it down as a medicine."

* *Artis Veterinariæ*, lib. iii. c. 48. Vide *Scriptor. Rei Rusticæ*, tom. ii. p. 1152. lib. xxix. c. 5.

And PLINY * enumerates, as common antidotes, the slimy saliva from under the tongue of a mad dog, to be given in drink; the liver of the dog which gave the wound, to be eaten either raw or boiled, but especially raw; a worm, which is said to be under the tongue of the dog, to be eaten after certain ceremonious preparations; or his flesh to be eaten salted.

A dog has been inoculated with the saliva of an hydrophobic person; and two rabbits were inoculated with the fasting saliva of the patient who has been the subject of the preceding narrative; without receiving the smallest injury.

These, it must be acknowledged, are not decisive proofs that the disor-

* *Histor. Mundi*, lib. xxix. c. 5.

der can never be communicated in any of these ways. Even the bite of a mad animal, which we know to be the common way by which it is conveyed, is so far from giving it with certainty, that a very great majority of those who are bitten are known to escape the infection.

It is probable, however, that the disorder is rarely, if ever, conveyed in any other way than by the bite; and I am persuaded that no anxious solicitude is requisite to avoid receiving the infection, any farther than to guard against the bite of animals, or men, who may be under the disorder; to be careful that their slaver, froth, or spittle, do not come upon a sore, wound, or scratch; and to be careful not to receive the patient's breath too familiarly. For though it may be

doubted whether there be any certain instances that the infection has been communicated in either of the two last mentioned ways; it is proper to use every prudent precaution, so far as precaution does not rise to the weakness of anxious solicitude, or prevent that due attention to the unfortunate sufferer which humanity demands.

As the canine poison often fails to produce any sensible effect whatever; so it seems probable that, when it does act, it may exert itself with various degrees of violence, according to the stage of the disorder, or other circumstances of the dog who gave, and the nature and seat of the wound, the natural constitution, or accidental state of body, of the person who received, the bite. In cases where it occasions but slight indisposition; or where more

considerable, or even violent, disorder, has not been accompanied with the peculiar symptom, *dread of water;* or not in a very striking degree; the disease may not be understood, as arising from the bite of a mad animal; but may pass as an hysterical, or tetanic affection, in which the canine poison may not be suspected to have any concern. This is, I think, a consideration worthy of attention. But whatever truth there may be in the supposition, it is certain that some have died with the spasmodic and other symptoms of this disorder, within the usual period of two or three days, without discovering the smallest *dread or dislike of water*; and Dr. MEAD relates the case of a soldier, of a strong habit of body, who once a month was seized with a great anxiety, palpita-

tion of the heart, and difficulty of breathing; who had been bitten by a mad dog about six weeks before he began to complain; and whose fits became every month less violent, and at last quite left him, by bleeding, cold bathing, the powder of lichen with pepper, and volatile medicines during the oppression.*

It is equally certain that they who have had a dread of water to a considerable degree, have rarely recovered. But this circumstance, however discouraging, ought not to lead us to despair. Cases of this kind, fortunately for mankind, are not very frequent; of those which do occur, the greater number probably fall into injudicious hands; and unhappily, but

* MEAD *on Poisons;* Works, vol. i. p. 87.

little is yet known, with any degree of certainty, by the most judicious, and that little is commonly brought into action too late; the unfortunate sufferers seldom applying, as the disorder is seldom suspected, till the dread of water is become too conspicuous and distressing to have any doubt of its nature, or much prospect of a cure.

In the *methods of prevention*, till of late years, the moderns have been, too generally, miserably deficient; deserting the most rational methods of the ancients, in which the attention was principally directed to the wounded part; though I must confess that they too disgraced their better practice by combining with it a variety of inefficacious, and often fanciful and absurd antidotes; of all which examples may

be found in great abundance, in PLINY *, CELSUS †, VEGETIUS ‡, and other ancient writers. They have neglected too generally to draw out the venom, by washing, sucking, scarifying, cupping, enlarging the wound, and keeping up a constant drain in the part immediately injured; and relied on the use of a variety of imaginary specifics; whose efficacy it was impossible to know beforehand. And since no certain signs of infection have been discovered, and so great a number of those who have been bitten, never receive it, it was equally impossible, or at least exceedingly difficult, to determine by the event. For by

* *Hiſtor. Mundi*, lib. xxix. cap. 5. p. 726.

† *De Medicina*, lib. v. cap. xvii. p. 307, 308.

‡ *Artis Veterinariæ*, lib. iii. cap. 84. Vide *Scriptores Rei Rusticæ Veteres Latini*, vol. ii. p. 1152.

what method can it be ascertained, that a person who escapes, after having taken a supposed specific, might not be in the number of those happy individuals, who, though bit, had not received the infection; and would have escaped the disorder, had he taken no specific at all?

At length, however, the specifics have so frequently been found to fail, that they have lost all credit with men of experience and judgment; who have now adopted a more rational mode of investigating the causes and cure of diseases, than was in general formerly pursued: having from fatal experience received the most awful conviction of this important truth, that every practice in the art of healing, which has only fancy, or hypothetical theory, and not strict analogy,

derived from actual observation, and the known nature of things, for its foundation, is not only not to be relied on, but of the most pernicious tendency; and ought, on all occasions, to be rejected at once, and without hesitation, as not only likely to deceive our hopes, where it is of the utmost importance that they should not be deceived, but to detain us, by a misguided reliance, in the most fatal ignorance.

The method of prevention, by attending to the wound, has at length been judiciously revived by many physicians of the present enlightened age; and particularly by the late Dr. FOTHERGILL *, by Dr. HAYGARTH of

* *Medical Observations and Inquiries*, vol. v. p. 290.

Chester, and by Dr. PERCIVAL † of Manchester; whose proposed methods of drawing out the cause of this dreadful malady from the wounded part, are so perfectly rational, and formed upon such just deductions from what we know, and have experienced, as to promise great benefit, both in their immediate good effects, and in the farther knowledge of the disorder, to which, if united with other practices, equally rational, they may lead the way.

When the characteristic symptoms of the disorder appeared, the *dread of water*, or difficulty of drinking, the practice of the ancients was in some respects rational; but for the most

* Essays Medical, Philosophical, and Experimental, vol. ii. p. 313.

part of it was trifling; and not unfrequently of a pernicious tendency; as may be seen at large in CÆLIUS AURELIANUS. As for CELSUS's notable remedy, it was founded upon an error, which has too generally obtained both in ancient and modern times; notwithstanding the judicious remark of CÆLIUS, that they who proposed, or practised it, were not aware, that *the cure of the malady did not consist in the sick being compelled to drink, but in their drinking without difficulty or reluctance; that drinking usually increased the convulsions; and that the convulsions frequently brought on death:* of which CELSUS, who copied the plan of immersion in cold water, and compulsive drinking, from some of the earlier physicians, was not altogether ignorant; since he says, im-

mediately after, that there was danger of bringing on, by this method, fatal convulsions in weak persons; to prevent which he proposes, that the persons so plunged in cold water by surprise, should immediately after be immersed in a bath of warm oil.

But quitting the antidotes of the ancients, and our own specifics, which have so often been found to fail, and of which we have no proof that they ever succeeded; and giving up the unsafe practice of immersion into cold water; which they only proposed and practised as a compulsive method of making the hydrophobic drink, and at the same time of quenching his thirst, and overcoming his dread of drinking; mistaking that for a mental, which was merely a bodily affection; and which we have absurdly converted

into a means of prevention; the moment symptoms of disorder appear, however slight, in persons who have been bit by a mad animal, resembling those which usually precede or accompany the dread of water, it would be right to have recourse to the use of such powerful remedies as have been recommended upon the most rational grounds, by modern physicians, and especially of late, in such doses, and with such frequency of repetition, as the symptoms may appear to demand. And since it has been found that hurry and precipitation in increasing the doses of powerful medicines, a practice to which the violence and rapidity of the malady but too naturally led; and that the complication of methods which have too generally been adopted, that none might be neglected where

all were doubtful; and that that might be effected by their united energy, which we dare not trust to them singly; have been deplorably unsuccessful; let us persevere with determined firmness in some one rational and well-digested plan; and, while we hope in a doubtful method, in the course of so rapid a disorder, in which time lost can never be regained, let us not timidly fly from one doubtful, though vigorous plan, to another not more vigorous, and equally doubtful. In this way we shall at least give a fair trial to the method we may adopt; and may thus so learn, by repeated trials, what particular medicines, and methods, can or cannot do, as to know better than we now do, how to direct our efforts, and on what most to place our reliance; and may in time come to know, with some de-

gree of certainty, when the disorder is curable, and when not; and by what means only we may hope to effect a cure.

On this plan, as nearly as might be, was the treatment of the present case conducted. The wound continued open for a considerable time, in consequence of the application of the actual cautery as soon as the commencement of the complaint excited alarm; but no particular pains were taken to keep it open, because it was supposed, by the effects produced, that the poison had already entered into the system; and because, as these effects soon appeared to be giving way, and the disorder had been protracted long beyond the usual fatal period, when it was suffered to heal, there was little

reason to doubt that the patient would recover.

The disorder was allowed to proceed till it had assumed what is esteemed its characteristic mark, the *dread of water*; because no certain remedy for it was known: and had attempts been commenced to cure canine madness before any certain symptoms of its existence had appeared; and had the plan been so well chosen and conducted, as to succeed in preventing their appearance, the world would have wanted the benefit of a valuable experiment; and the disease being unknown, the cure would have been, of great value indeed to the patient, but of little benefit to mankind.

When these symptoms should appear, I had determined to pursue an an-

tispasmodic and tonic plan; and MUSK was the antispasmodic to which I had determined to give a fair and complete trial. When, therefore, the *dread of water* had indisputably shown itself, I instantly commenced the plan which I had laid down. MUSK was given; and it seemed immediately to have a decided and striking effect in checking the disorder. The use of it was pushed to as large a dose, and as great a frequency, as seemed necessary, and continued with a perseverance, of which the happy effects are the best commendation. But the long pertinacity and obstinate recurrenee of some of the symptoms, and especially of the spasmodic ones, after the formidable dread of water had disappeared, or was so inconsiderable as not to excite the smallest alarm; and after the prin-

cipal danger seemed to be over; occasioned such an immense consumption of this dear article as led me to diminish it, and to supply its place with other antispasmodic medicines of a less expensive kind. With this view, I at first used the FLOWERS OF ZINC, which not appearing to be sufficiently powerful, I at last, with the most decided good effect, had recourse to LAUDANUM.

Whether LAUDANUM alone, without the aid of *musk*, would have completed a cure, seems rather doubtful. It appeared, indeed, to have a very good effect in the commencement of the disorder, before the *certain symptom* of canine madness had discovered itself. But having known the most liberal use of it to fail, both in my own practice, and in that of others,

I could not trust with confidence to what had hitherto deceived myself, and all who had made trial of it; and had therefore recourse to a medicine, which I was persuaded had not yet been made to put forth its strength; and of whose efficacy in the cure of this disorder, were it to be more liberally used than it had hitherto been, a very strong prepossession in its favour, as a powerful antispasmodic, and peculiarly adapted to the cure of a disease which I had long looked upon as entirely spasmodic, had inspired me with very sanguine expectations. These expectations were not disappointed; and the *musk* was not laid aside for laudanum till it had apparently brought the patient into perfect safety.

It seems probable indeed, that an-

tispasmodic and tonic medicines will prove the only efficacious remedies in this disorder; that different antispasmodics may best suit different cases; and that WINE, and the COLD BATH, will generally be found to be most excellent, if not necessary auxiliaries, in all; excepting in such cases, and at such times, when a considerable degree of fever may demand the intermission or moderation of their use.

Bleeding, with LEECHES applied to the temples, gave such evident and speedy relief to the pain in her head; and, in consequence, to the other distressing symptoms with which it was connected, in the beginning and height of the disorder; that she often petitioned for their application. But in the decline of the complaint, they sometimes produced little, and some-

times no relief; and more than once she was seized with a fit during their application.

Also OPENING MEDICINES, so given, when she was able to take plenty of nourishment, as to procure daily and free evacuations by stool, she not only bore well, but they were of manifest relief to her; and she was always less comfortable when they failed of their proper effect.

The *purging mixture* of the house, which was occasionally used for this purpose, consists of *infusion of sena*, and *glauber salts*.

The *febrifuge decoction*, which was sometimes prescribed as a tonic medicine, is composed of *Peruvian bark*, *snake-root*, and a small proportion of *proof spirits*.

The *laudanum*, so often mentioned,

was the *tinctura thebaica* of the late London Pharmacopœia.

As all other SPECIFIC ANTIDOTES have been found to fail, so has the ORMSKIRK MEDICINE, which has of late been most generally used, disappointed our hopes, not only in this, but in a variety of other cases, of which accounts have been given by medical writers. HANNAH SPRINGTHORPE took it early after the bite; it was procured of a reputable and established vender; and it was given exactly according to the directions contained in the printed paper, with which it was accompanied.

It is scarcely necessary to remark, that SEA BATHING, according to the usual mode in which it is now practised, has so often been found to be of no efficacy in the prevention of the

disorder; that were its failures as generally known as they are experienced, and the circumstances under which it has failed, properly attended to, this practice, innocent for the most part in itself, but injurious in its consequences, would soon be as generally laid aside, as it is now adopted, and trusted to: since, at best, it can be of no use but to amuse the mind with imaginary safety, and free it from the pain of apprehension; effects greatly to be desired, could they be obtained without danger. But unfortunately, while they who have the unhappiness to be bit, trusting to a remedy which has no support, either from reason or experience, are hurried immediately from home, that they may receive that benefit which its early use alone pro-

mises, they are perhaps deprived of the chance of eradicating the mischief, by losing the opportunity of trying the only methods, which if used without delay, and with due diligence and perseverance, seem likely to be successful. It is, indeed, time that all trifling should be discarded from our attempts to prevent a disorder which has too generally baffled our most vigorous exertions; the sufferings of which are extreme; and whose termination is terrible.

The immediately CUTTING OUT of the whole WOUNDED PART, with as much of the injured flesh as may seem necessary to prevent the probability of any of the venom introduced by the bite remaining behind, has been strongly and rationally recommended; and particularly by

the late excellent and judicious Dr. J. FOTHERGILL *. But this, in many situations of the wound, is impracticable; in all, is too violent and painful to be generally submitted to; and in some, would leave a deformity which to numbers would be an insurmountable objection. When it can be done with safety and effect, and the patient is willing to submit to it, it ought to be done, and to be done completely. But in general it will probably be found to be all that we can accomplish, if we can bring the patient to consent to have the wound somewhat enlarged, where it shall appear necessary or adviseable, or to have any lacerated parts taken away.

The use of the *actual* or *potential*

* *Medical Observations and Inquiries*, vol. v. p. 294.

CAUTERY does not seem so likely to be beneficial, as it will probably detain the poison in the wound till the eschar separates, when it may be too late for its discharge by the succeeding ulcer; and will prevent the use of means more likely to be efficacious. But however proper it might be when employed instantly after the bite, from the use of it in the present case nothing could be expected; since the wound was received on Monday, and was not cauterized till the Tuesday se'nnight following.

To the practice of filling the wound with GUNPOWDER, and exciting an explosion, there are similar, and perhaps greater objections, which it is not necessary particularly to point out.

CUPPING, which has been recommended both with and without scari-

fication, may in like manner delay the more efficacious means, without affording any great, much less any equivalent, advantage.

SUCKING THE WOUND, which has been proposed, and practised, seems a more likely way of drawing out the poison, and will no way interfere, but coincide with what I think much the best practice; but perhaps it may be thought too dangerous to the operator, to be recommended with confidence. If there be any wounds or chaps in the mouth or lips, or if the gums be very liable to crack and bleed, it ought not to be ventured upon. And, indeed, the mode which I would propose, may possibly answer every purpose which this is intended to effect: I mean the method of washing the wound with water, recommended by

Dr. HAYGARTH. A method so simple and easy, as to be in the power of the poorest and most uninformed; so rational, as to afford the most flattering promises of success; cannot too generally be made known. I shall set it down in Dr. HAYGARTH's own words:

" It is universally allowed by phy-
" sicians, that the spittle of a mad
" animal, infused into a wound, is the
" *only* cause hitherto known, that can
" communicate canine madness to the
" human body. This poison does no
" immediate mischief, but is slowly
" absorbed into the blood; and suffi-
" cient opportunity is given to remove
" it, before any danger can arise.
" Whenever any person is bitten, the
" plain and obvious means of prevent-
" ing any future injury, is, first, to
" wipe off the spittle with a dry cloth,

" and then to wash the wound with
" cold water; not slightly and super-
" ficially, but abundantly, and with
" the most persevering attention; in
" bad cases, for several hours. After
" a plentiful effusion of cold water,
" but not sooner, warm water may be
" applied with safety and advantage;
" a continued stream of it, poured
" from the spout of a tea-pot, or tea-
" kettle, held up at a considerable
" distance, is peculiarly well adapted
" to the purpose. If the canine poi-
" son infused into a wound were of a
" peculiar colour, as black, like ink,
" we should all be aware that plenty
" of water, and patient diligence,
" would effectually wash out the dark
" dye; but this could not be expect-
" ed by a slight and superficial ablu-
" tion. After a bite has been care-

" fully washed, colour it with saliva,
" tinged by ink, &c. When some
" hours have elapsed, wash out the
" stain. A visible proof may thus be
" obtained, how soon and perfectly
" water may cleanse a wound from sa-
" liva. As a proof that slight washing
" of the wound is not sufficient to
" cleanse it effectually from the poi-
" son, we may mention, that in some
" cases, after inoculation from the
" small-pox, the poisonous matter has
" been attempted to be washed out of
" the wound, by persons who wished
" to prevent its effects; yet the ino-
" culated small-pox appeared at its
" proper period. These unsuccessful
" attempts were performed secretly,
" hastily, and timidly, by a female
" hand. But in a case where the in-
" oculated incisions were probably

" washed with greater care, infection
" was prevented. Such facts teach us
" the importance of patient persever-
" ance in washing away the poison;
" but they need not abate our confi-
" dence that such perseverance will
" certainly be successful.

" The ablution should be accom-
" plished with great diligence, and
" without delay; and may be per-
" formed by the patient, or any as-
" sistant. However, as the appre-
" hension of this dreadful disorder
" always excites the greatest anxiety,
" a surgeon's advice and assistance
" ought to be obtained as soon as pos-
" sible, in all cases where the skin is
" injured. He will execute these di-
" rections most dexterously and com-
" pletely. In a bad wound, the poi-
" son may be conveyed deep into the

" flesh, by long teeth or lacerations. " In such circumstances he should " open and wash every suspicious " place; and, whenever any painful " uncertainty can remain, he should " cup and syringe. If the bite have " been neglected till the inflammation " begins, he should, after shaving off " the inflamed surface, cup, syringe, " and wash, with double diligence. " By this method of purification it " cannot be doubted that every par- " ticle of poison, and consequently " that every cause of danger, may ef- " fectually be removed *."

The application of a BLISTER to the part, or of any thing else which may seem more advisable, to promote and keep up for as long a time as shall be

* Vide Dr. PERCIVAL'S *Essays, Medical, Philosophical, and Experimental*, vol. ii. p. 363.

thought expedient, a constant discharge from the wound, is not only not inconsistent with this method, but appears to be a very proper appendage to it.

Besides washing the wound, and keeping up a constant discharge from it for a considerable time, I would recommend the daily use of the COLD BATH; that PERUVIAN BARK, and STEEL in any form, but particularly that of SALT OF STEEL, should be taken in such doses, and under such regulations, as the peculiar constitution of the patient may require; and that such a constant but temperate use of wine be observed as may best insure its invigorating and tonic effects, without endangering the introduction of its debilitating consequences.

It is of great importance to mankind, that the symptoms of madness in dogs, in all its stages; and, if possible, in its very approach, and before it actually commences; should be so exactly known, and the knowledge of them so universally diffused, that people in general may be as well guarded as the nature of the thing will admit, against the danger of being bitten, and of experiencing the severe sufferings, and dreadful death, which may ensue.

With a view to obtain the best information on this subject, I applied to Mr. MEYNELL, of Quorndon, in the county of Leicester; who, I was informed, had paid great attention to this disorder among his dogs, and was ready to communicate to me the result

of his accurate observations. I therefore addressed to him the following queries:—

1. What are the symptoms of canine madness in dogs, in the beginning, progress, and termination?

2. Is the *dread of water* a symptom of this disorder in these animals, as it is almoſt universally in the human species? And, if it be, is it constant, or frequent, or rare?

3. Does the disorder commence at any regular period after the bite? And, if the periods of its commencement be various, what is the shortest, what the longest, and what the most frequent period?

To these queries I received the following answers:

1. "The first symptom of canine

" madness in dogs is, I believe, a fai-
" lure of appetite in a small degree.
" I mean that the dog does not eat
" his usual food with his usual eager-
" ness; though, if better food be of-
" fered him, he may eat it greedily.
" A disposition to quarrel with other
" dogs comes on early in the disease.
" A total loss of appetite generally
" succeeds; though I have seen dogs
" eat, and lap water, the day before
" their death; which generally hap-
" pens between seven and ten days
" after the first symptom has appeared.
" A mad dog will not, I believe, cry
" out on being struck; or show any
" sign of fear on being threatened;
" though he will, very late in the dis-
" ease, appear sensible of kind treat-
" ment."

2. "I am confident that a *dread of* "*water* is not a symptom of this dis- "ease in dogs."

3. "I have never known a dog show "symptoms of the disease in less time "after the bite than ten days; and I "have known many instances of dogs "having died mad as late as eight "months after the bite. I think the "symptoms generally appear between "three and eight weeks after the "bite."

Afterwards, in conversation on the same subject, Mr. MEYNELL furnished me with the following facts: He observed, that—

1. "A mad dog, in the height of "the disorder, has a disposition to "bite all other dogs, animals, or "men. When not provoked, he usu- "ally attacks only such as come in

" his way; but having no fear, it is " peculiarly dangerous to strike at, or " provoke him."

" Mad dogs appear to be capable of " communicating the infection early " in the disorder, and as soon as they " begin to quarrel with, and bite other " dogs."

" The eyes of mad dogs do not " look red, or fierce; but dull; and " have a peculiar appearance, which is " easily distinguished by such as have " been used to observe it, but not " easy to be described."

" Mad dogs never bark; but occa- " sionally utter a most dismal and " plaintive howl, expressive of ex- " treme distress; and which they who " have once heard can never forget. " So that dogs may be known to be " going mad without being seen, when

" only this dismal howl is heard from " the kennel."

" Mad dogs do not foam, or froth, " at the mouth; but their lips and " tongue appear dry, and foul, or " slimy."

" Mad dogs are always sensible, " and know their master, or those " they have been used to."

2. " Though mad dogs generally " refuse both food, and drink, in the " latter stage of the disorder; yet " they never show any *abhorrence or* " *dread of water*; will pass through it " without difficulty, and lap it eager- " ly to the last. But it is remarkable, " that though they will lap water for " a long time, and eagerly, and do " not seem to experience any uneasi- " ness from it, yet they do not ap- " pear to swallow a single drop of it:

" for, however long they may conti-
" nue lapping it, no diminution of
" quantity can be perceived."

3. " A dog had been bitten, and
" confined by accident, and not from
" any suspicion of danger, for a whole
" year, so as to have no communica-
" tion with any other dog all the
" time; and went mad at the end of
" that period."

To these were added the following facts relative to mad dogs, which do not properly belong to any of the above heads:

" I am persuaded that the disorder
" never originates from hot weather,
" putrid provisions, or from any other
" cause but the bite. For, however
" dogs may have been confined, how-
" ever fed, or whatever may have
" been the heat of the season, I never

" knew the disorder commence with-
" out being able to trace it to that
" cause; and it was never introduced
" into the kennel but by the bite of a
" mad dog. I do not say that I am
" certain that the disorder never ori-
" ginates from any cause except the
" bite; but I say that I never knew
" a dog go mad that I had not reason
" to believe had been bitten."

" Some dogs, in the last stage of the
" disorder, have a locked jaw."

" A mad dog bit a young man in
" the face, which he tore very much;
" for which the father, who happened
" to be present, seized him by the
" neck, in order to correct him, not
" knowing him to be mad, as he
" afterwards found him to be. In the
" struggle, the dog bit the man's leg,
" through a very thick woollen stock-

" ing, such as rustics commonly wear.
" The son escaped the disorder. The
" father received the infection, and
" died, with strong symptoms of hy-
" drophobia."

" One of my horses was bit, and
" went mad, but did not bite any per-
" son or animal."

Wishing for still farther information; after the above general, I wrote the following more specific queries:—

The failure of appetite, being common to other diseases, can only give strong reason for suspicion that madness is coming on, when the dog is known to have been bit by a dog suspected, or known to be mad; but ought, perhaps, on all occasions to excite caution, and lead us to tie up a dog so affected, for a reasonable time; though it be no certain symp-

tom of the disorder. I would ask, whether the disposition to quarrel with other dogs, without cause, and in a manner unsuitable to their usual temper; and especially an unusual moroseness and irritability, not only towards strangers, but also towards those persons who may have been familiar with them; may be considered as certain signs of beginning madness? or, whether such moroseness and irritability accompany other complaints in dogs, as fevers, or the like, with which madness, and especially in its first stage, may therefore be liable to be confounded?

How soon does the disposition to barking cease? Do they bark in the beginning of the complaint? Or does the entire cessation from barking commence with the first stage?

Does the propensity to bite begin, and barking cease, at the same time? If they do, is biting, without barking, a certain sign of madness? If they do not, is either of them singly? or must we wait for certainty, till they are both united? Or is there any other symptom which is a certain characteristic of the disorder?

Dr. JAMES says, that mad dogs bark with a kind of hoarseness; and that the first sure sign of a dog's being actually mad, is an alteration in his bark. How far is this true? Or, is there any truth in it at all? SAUVAGES * says, "il n' aboie point, ou "gronge seulement;" yet he afterwards observes, "*il a la voix rauque*;" but this, I imagine, relates to his howl;

* *Sur la Rage*, n. 90. Chefs d'Œuvres, tom. i. p. 110.

for he immediately subjoins, " il hurle " sans suject."

Does the disorder always come on gradually, so that mischief may easily be prevented by timely care? Or, does it sometimes come on so suddenly as to give little or no warning?

As death usually happens on, or between, the seventh and tenth day after the first symptoms of the disease appeared, how long is it thought necessary to confine dogs, after a suspicion of its commencement, if the disease not only makes no progress, but appears to go off again?

Do slight symptoms of the disorder sometimes show themselves, and go off again? Or, are we always to consider such slight complaints, for which dogs are often confined, without any

consequent madness, as arising from some other disorder?

If such slight symptoms do really appear, in consequence of a bite, and go off again; do dogs in which the disease thus appears to go off again, relapse, and become mad at last? Or, do some entirely escape?

Do dogs, known to have been bitten, frequently escape, as well as men?

Do mad dogs, in which the disorder has made any progress, ever recover? Or, do all who have once been actually mad, and in a considerable degree, certainly die of the disorder?

Is there any thing characteristic in the manner of a dog's running, and in his general appearance in passing along, which may point him out to be a mad dog?

Do the hairs of a mad dog stand erect like bristles?

Do mad dogs run, and stand still, by fits, as if bewildered, and not knowing what they do, or why they run?

Is their snapping and biting at every thing which comes in their way as they run, without barking, a characteristic sign of madness?

Do mad dogs hang down their heads, ears, and tails, as they run; or at other times; or always?—Dr. JAMES says they carry their tails as it were twisted.

Some writers assert that the eyes of mad dogs are fierce and red, like fire: some say that they are heavy, watery, and full of tears, in the first stage; and inflamed, and fiery red, in the last. But I understood from you,

that they were never red and inflamed; but had a peculiar look. Can that look be described?

Is a dog, in the beginning of the disorder, disposed to sneak away growling? Does he carry his head as if sleepy? Does he shun the society of other dogs? And do they avoid him?

Most writers, both ancient and modern, assent that mad dogs, in the last stage of the disorder, foam, and froth at the mouth, and that very copiously. Is this an error copied by one writer from another? If it be true in some cases, and not universally so; how can it be accounted for, that in all your experience you have not observed any such thing? SAUVAGES *

* *Sur la Rage*, n. 90. Chefs d'Œuvres, tom. i. p. 111.

says, " il tire la langue, qui paroit " plombee;" and adds,—" il rend un " bave epaisse et abundante."

Does a mad dog appear to be in a fever? Does he pant much, and especially when running? Does he run with his mouth wide open; and with his tongue hanging quite out of his mouth, and dropping with slaver? All these things have been asserted by medical writers.

Does the dog that is going to be mad look dejected and melancholy, and cease to show signs of hilarity at the approach of his master? I suppose he may show signs of pleasure in some degree; as you observe that he is not insensible of kind treatment.

Do any spasmodic symptoms, so universal in canine madness in the

human species, discover themselves in dogs? And, if they do, in what manner, and at what periods of the disorder, do they appear?

Is it usual for huntsmen to distinguish between *biting madness*, and *sullen madness?* And, if it is, what is the cause of this difference? Is each of them a real madness? Or, is sullen madness a symptom of fever, or of some other disorder? Or, are they only different states, in different stages of madness?

To these queries I received the following answers; which though not complete, contain several interesting and important facts; and are, in substance, an answer to most, if not all of them.

"I do not recollect ever to have

" heard a dog bark after I have per-
" ceived symptoms of madness upon
" him."

" I do not know that I ever saw a
" mad dog froth or foam at the
" mouth; and I know that I have
" seen many that did not."

" I do not say that mad dogs are
" always sensible; but I think that
" they generally are sufficiently so to
" know them they have been used
" to."

" I consider an *unusual disposition to*
" *quarrel with other dogs as a certain*
" *sign of beginning madness;* and it is
" the only one I know."

" I believe the disorder always
" comes on so gradually, as that mis-
" chief may be prevented by proper
" care."

" I believe, after symptoms have " ever appeared, they never go en- " tirely off; and that the disease, " though sometimes very slow in " its progress, always terminates in " death."

" Dogs known to have been bitten " frequently escape, but I believe not " near so frequently as men."

" Almost all the mad dogs that I " have seen have been confined."

" The hairs of a mad dog do not " stand erect, more than those of " other dogs."

" I do not know that there is any " thing remarkable in the manner of " a mad dog's carrying his head, or " his tail."

" I do not know that there is any " thing fierce in the appearance of

" the eyes of a mad dog. I believe I
" should know a mad dog to be mad
" from the appearance of his eyes,
" but I cannot describe this appear-
" ance."

" I do not know that a dog in the
" beginning of this disorder, is dis-
" posed to sneak away growling, or
" to carry his head as if sleepy, or to
" shun the society of other dogs;
" but if I observed any thing parti-
" cular in the manner of a dog, I
" should certainly confine him. I do
" not believe that dogs are more afraid
" of a mad dog than they are of any
" other dog that seems disposed to
" attack them."

" There are two kinds of madness;
" both of which I have known to
" originate from the bite of the same

" dog. Among huntsmen one is " known by the name of *raging*, the " other by that of *dumb* madness. " In *dumb* madness the nether jaw " drops, and is fixed; the tongue " hangs out of the mouth, and slaver " drops from it. In *raging* madness " I believe the mouth is shut, except " when the dog snaps, or howls; " and that no moisture drops from " it."

Various have been the methods proposed, both by ancient and modern writers, to discover whether a dog that has bit any person, and been destroyed, was mad or not; but as they are none of them to be depended upon, they are not worthy of notice.

It seems probable, that many of the symptoms of madness in dogs enu-

merated by medical writers, either do not exist at all, or are at least ambiguous and uncertain. I shall therefore decline drawing up an account of the symptoms on such doubtful authority; and rest the knowledge of the disorder in these animals upon the facts communicated by Mr. MEYNELL; which, if properly attended to, will, I apprehend, afford us more exact, and certainly more authentic, information concerning it, than has hitherto been given; and will serve sufficiently to put us upon our guard against so dreadful an accident as the bite of a mad dog.

The symptoms of approaching madness seem not to be so perfectly certain as those of its complete existence and establishment; but loss of appe-

tite, or any thing unusual in the manners and temper of a dog; and especially an unusual disposition to quarrel with, and bite other dogs; and still more, if they appear to quarrel and bite, without growling or barking; hold out a warning to all proprietors of these animals, immediately to guard against the injury they may do, by destroying them, if circumstances shall appear alarming; or, at least, and what would perhaps be most consistent with humanity, when it can be done with ease and safety, to tie them up till the disorder shall be confirmed, or the danger be at an end; which it may be supposed to be in a fortnight; as death generally happens between the seventh and tenth day from the commence-

ment of the symptoms of canine madness.

Since, contrary to the received opinion, few or no mad dogs froth, or foam at the mouth; though it is not certain that none ever do so; we are not to regard the appearance, or non-appearance, of foam about the mouth of a dog, as a criterion of the existence, or non-existence, of the disorder.

The propensity to bite without barking, being a certain characteristic of actual madness in dogs, no attentive person can be mistaken in the disorder when it is perfectly confirmed. Whenever, therefore, this symptom shall appear, there can be no doubt of the state of the animal; and both the owner and others will

be warned to guard against the danger, by guarding against the bite, and by destroying or securing him as soon as it can with safety be effected.

All persons should, on all occasions, be attentive to the appearance and conduct of dogs; and especially should avoid all dogs, whether strangers or not, which they shall observe to have any thing particular in their manner, or to fly upon, and bite every other dog they shall meet; and should be careful never to approach unguardedly too near, oppose, strike, or any way irritate any strange dog whatever.

The approach, or beginning, of madness in dogs, being nearly, and its completion well, ascertained; such persons as have been bit by dogs that were not really mad, may easily

be satisfied of the non-existence of the disorder by the manner of the dog, and the circumstances of the bite; and particularly by his not barking; and may thus be freed from an apprehension which has often, when perfectly groundless, been productive of great and durable anxiety and misery. But nothing can so effectually free the mind from the distress of doubt and uncertainty; and on the one hand put an end to our anxiety and misery, by determining with certainty that the dog was not mad; or, on the other, impel us to the use of rational and vigorous means of prevention, by proving that he was so; as securing and preserving the dog that gave the bite, for a sufficient length

of time, to ascertain the one or the other.

Though not every dog that is bitten receives the disorder, yet, as the time of its appearance after the bite is so very uncertain; and as a great proportion of those that are bitten do actually receive it; and as there is no criterion by which we can ascertain whether a dog has, or has not, received the infection, but the breaking out of the disorder; it is earnestly to be wished that all owners of dogs would immediately destroy, or secure for a great length of time, every dog known, or but suspected, to have been bitten by a mad dog.

It is also earnestly to be wished, that all persons possessing dogs would

immediately tie up, or destroy, such of their dogs, whether known to be bitten or not, as shall begin to be disordered in any way, of which the nature and cause is not perfectly obvious; and especially if there be the smallest reason to suspect that the dog was bitten, and that the disorder is really an incipient madness.

It is still more to be wished, that they would immediately destroy all dogs known to be in any stage of madness; if it be at the same time known that they have not yet bitten any other animal, and particularly no person whatsoever: and that no dog that has bitten any animal or person be destroyed as a mad dog if it can be avoided; but

that every such dog be secured, and tied up, that it may be certainly known whether he be mad or not. If he is, the symptoms of confirmed madness will plainly discover themselves, and he will die in ten days, and less; if he is not, he may be safely enlarged in the space of a fortnight; and the person bitten will be freed from the most distressing apprehensions.

I have now finished what I intended to say on the subject of this interesting case. Many more observations and deductions will doubtless occur to the judicious, from the facts here laid down; and happy shall I be, if what I now communicate to the Public shall be instrumental in promoting the cure, or

prevention, of a disorder which has so long baffled the skill of the physician, while it has afflicted the unhappy sufferer with a calamity as hopeless as it is extreme.

FINIS.